STRATUS
ENVIRONMENTAL, INC.

3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

August 22, 2005
Project No. 2028-0031-01

Mr. Michael Smith
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive
Rancho Cordova, California 95670

Re: No Further Action Request, Nella Oil Company Station No. 31,
12008 Plaza Drive, Grass Valley, California

Dear Mr. Smith:

Stratus Environmental, Inc. (Stratus), on behalf of Nella Oil Company (Nella), is submitting this No Further Action Request (NFAR) for Nella Station No. 31 (the site), located at 12008 Plaza Drive, Grass Valley, California. In a letter dated July 27, 2005, the California Regional Water Quality Control Board (CRWQCB) stated that closure of the environmental case at this site appeared warranted, and that submission of the NFAR was necessary for a formal evaluation of case closure by CRWQCB personnel. The attached documents are in compliance with guidelines established by the CRWQCB in Appendix A of the *Tri-Regional Board Recommendations for Preliminary Investigation and Evaluation of Tank Sites* (April 2004).

If you have any questions, please call Jay Johnson at (530) 676-6000 or Scott Bittinger at (530) 676-2062.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Jay R. Johnson, P.G.
Senior Project Geologist

Scott G. Bittinger, P.G.
Project Manager

PROFESSIONAL GEOLOGIST
Scott G Bittinger
No 7477
STATE OF CALIFORNIA

Attachment: No Further Action Request

cc: Ms. Barbara Wozniak, Nella Oil Company
Mr. Markus Niebanck, Nella Oil Company
Ms. Julia R. Amaral, Property Owner
Mr. David Huff, Nevada County Environmental Health Department

NO FURTHER ACTION REQUEST SUMMARY
NELLA OIL COMPANY STATION 31
12008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA
CASE NUMBER: 290194
AUGUST 22, 2005

1.0 CHRONOLOGY

December 2001

Compliance soil sampling was completed during upgrading of the product line fuel delivery system at the site. The fuel additive methyl tertiary butyl ether (MTBE), and tertiary butyl alcohol (TBA), were reported in soil samples collected beneath a fuel dispenser at concentrations of 1.1 milligrams per kilogram (mg/Kg) and 2.9 mg/Kg, respectively.

Groundwater was also encountered during exposure of the upper portion of the underground storage tank (UST) cavity. Total petroleum hydrocarbons as gasoline (TPHG), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), and MTBE were reported in a grab groundwater sample collected in this area. A site plan illustrating the UST and fuel dispenser island locations is provided in Attachment 1.

November 2002

Five soil borings were advanced to characterize the lateral extent of subsurface petroleum hydrocarbon impact. Each boring was converted to a groundwater monitoring well (MW-1 through MW-5). Predominately fine grained soils (silts and clays) were encountered above decomposed granitic bedrock in each borehole. Bedrock was encountered at depths ranging from approximately 8 to 12 feet below ground surface (bgs). A geologic log of each well boring, well details, and a geologic cross section are provided in Attachment 2; well locations are included on the site plan provided in Attachment 1.

Soil samples were collected during the advancement of each well boring. MTBE was reported at concentrations ranging from 0.0022 mg/Kg (boring MW-3 at 9 feet bgs) to 0.04 mg/Kg (boring MW-1 at 10 feet bgs). A table summarizing soil analytical results is provided in Attachment 3.

February 2003

Prior to implementation of the site assessment activities in November 2002, Stratus was notified by the property owner (the Amaral Family) that a french drain was installed beneath the fueling station and the property south of the site in the late 1980's. The french drain consists of PVC piping that terminates in a storm drain inlet approximately 275 feet south of the service station. A figure illustrating the approximate location of the french drain is provided in Attachment 4.

The french drain outlet is visible from the ground surface. Stratus has periodically monitored the french drain outlet for the presence of discharged groundwater during various times of the year. Even following significant precipitation events, water has not been observed discharging from the french drain outlet to the storm drain.

Stratus purposely installed well MW-1 immediately adjacent to the french drain system in order to evaluate the possibility that a preferential pathway around french drain piping may exist. Based on available groundwater monitoring data (presented in Attachment 5), MTBE concentrations at well MW-1 are not significantly elevated relative to other wells impacted with MTBE (MW-2 and MW-3).

Groundwater Monitoring

On-site wells MW-1 through MW-3 are impacted with low concentrations of MTBE. Historical MTBE concentrations in groundwater have ranged from 5.1 micrograms per liter (µg/L) to 200 µg/L (MW-1), <1.0 µg/L to 91 µg/L (MW-2), and 9.5 µg/L to 24 µg/L (MW-3). Concentrations of TPHG, BTEX, and other fuel additives have consistently been reported below laboratory detection limits for the monitoring well samples. Petroleum hydrocarbon concentrations have consistently been reported below laboratory detection limits for samples collected from off-site wells MW-4 and MW-5.

MTBE concentrations in wells MW-1 through MW-3 appear to be decreasing with time. The following table illustrates annual average MTBE concentrations for the three groundwater monitoring wells impacted with MTBE.

Well ID	2003 Annual Average MTBE Concentration	2004 Annual Average MTBE Concentration	2005 Annual Average MTBE Concentration (2 Sampling Events)
MW-1	76.6 µg/L	45.8 µg/L	16.1 µg/L
MW-2	37.7 µg/L	18 µg/L	7.8 µg/L
MW-3	19 µg/L	13.4 µg/L	11.5 µg/L

These data strongly suggest that dissolved MTBE concentrations beneath the site are attenuating. At the time of the most recent groundwater sampling event (June 3, 2005), MTBE concentrations in the monitoring wells ranged from 5.1 µg/L to 11 µg/L, below the primary maximum contaminant level (13 µg/L) established by the State of California for MTBE.

Depth to groundwater in the on-site monitoring wells has ranged from approximately 4.5 to 7.5 feet bgs since monitoring was initiated in November 2002. The groundwater flow direction has been reported to the west and southwest at gradients ranging from 0.013 ft/ft to 0.025 ft/ft. Historical groundwater elevation contour maps are provided in Attachment 6.

Risks to Human Health

Low concentrations of residual and dissolved petroleum hydrocarbons are situated beneath a ground surface paved with asphalt and concrete. These paving materials are not impervious to soil vapors, but the potential exposure risk associated with volatilization of petroleum hydrocarbon vapors to indoor or outdoor air is unlikely to represent an exposure risk. Normal surface air movement is likely to dilute and remove impacted soil vapors from the site before concentrations reach risk levels.

Stratus reviewed Department of Water Resources (DWR) well completion records for the area surrounding the site in November 2002. A figure illustrating the approximate location of three water supply wells reportedly installed within 2,000-feet of the site, and a table summarizing information regarding construction of these wells, are provided in Attachment 7. Each of these water supply wells appear to have been installed at least 1,700 feet from the site. Stratus also completed a reconnaissance of the area within a 500-foot radius of the site; no water supply wells were located in the search.

Since water has consistently not been observed at the discharge point of the french drain, petroleum hydrocarbon impact beneath the site does not appear to impact surface water present within the storm drain systems in the site vicinity.

Given the distance of water supply wells from the site, and the limited extent of MTBE impact to groundwater, and that surface water does not appear to be impacted from petroleum hydrocarbons originating from beneath the site, dissolved petroleum hydrocarbon impact identified beneath the site appears to pose little risk to human health.

2.0 LOW RISK GROUNDWATER CRITERIA

2.1 *The leak has been stopped and sources, including free product, have been removed or remediated:*

Hazardous substance release mechanisms must be identified, if possible, and the release must be sufficiently abated so as to prevent ongoing pollution.

If the release was from a petroleum underground storage tank, the tank or appurtenant structure that leaked must be repaired or permanently closed per Article 7, Section 2672 of the UST regulations. Free product shall be removed to the extent practicable per Article 5, Section 2655 of the UST regulations.

Soil that contains sufficient mobile constituents (leachate, vapors, or NAPL), as determined by the site-specific plume characteristics and soil analytical data, to continue to degrade water, or result in a significant threat to human health, should be considered a source.

The product delivery system was replaced in 2001. Free product has not been observed beneath the site. Concentrations of petroleum hydrocarbons in groundwater currently meet water quality objectives; active remediation activities are not warranted.

2.2 *The site has been adequately characterized.*

The vertical and lateral extent of the subsurface impact must be defined to the degree that is necessary to evaluate whether the site currently poses, or in the future may pose, a significant threat to human health, waters of the State, or other nearby sensitive receptors. The level of detail required at a given site will depend upon the contaminant(s) of concern, the types of potential receptors, and exposure pathways, and the proximity of other potential receptors.

It is assumed that subsurface conditions are highly variable and that there is always some uncertainty associated with evaluating data at a site. However, the cost of obtaining additional data must be weighed against the benefit of obtaining that data and the effect the data may have on the certainty of decisions to be made at the site.

The presence or absence of horizontal and vertical conduits that could act as preferential pathways for contaminant migration should be evaluated as a part of the site characterization process. Vertical gradient evaluation may be necessary.

Given the low petroleum hydrocarbon concentrations in groundwater, further site characterization activities are not warranted.

2.3 *The contaminant plume is not migrating and chemical concentrations in groundwater are projected to meet water quality objectives through natural attenuation or engineered solutions prior to the beneficial use of groundwater.*

If groundwater within the plume is likely to be used before natural attenuation or engineered solutions are projected to complete the cleanup, then active or additional remediation may be required.

Plumes often display short-term variability in groundwater concentrations. These effects are due to changes in groundwater flow, degradation rates, sampling procedures, and other factors that are inherently variable. This variability should not necessarily be construed as evidence of plume migration or degradation. This site characterization database must support the conclusion that a plume is degrading or not migrating.

Petroleum hydrocarbon impact to groundwater appears to be stable and attenuating. At the time of the most recent sampling event (June 3, 2005), MTBE was reported in samples collected from wells MW-1 through MW-3 at concentrations ranging from 5.1 µg/L to 11 µg/L. Given that the State of California has established a primary maximum contaminant level (MCL) of 13 µg/L for MTBE, groundwater concentrations beneath the site appear to meet water quality objectives.

2.4 *No other waters of the State, water supply wells or other sensitive receptors are likely to be impacted.*

Water supply wells include municipal, local service or private wells, agricultural and industrial wells. Central Valley aquifers generally are not segregated into discrete units, but are subject to vertical and horizontal migration of water and any pollutants carried by or in the water, often by local pumping.

Surface water in the vicinity of the site (Olympia Creek) is routed through subsurface concrete lined storm drains. The french drain outlet into this storm drain has consistently been observed to not discharge groundwater. Given these observations, surface water in the site vicinity appears unlikely to be impacted from subsurface petroleum hydrocarbon impact originating from beneath the site.

No water supply wells appear to have been installed within approximately 1,700 feet of the site. Given the low dissolved petroleum hydrocarbon concentrations beneath the site, the limited extent of the petroleum hydrocarbon impact, and distance from the site, water supply wells in the surrounding area are unlikely to be affected by any dissolved petroleum hydrocarbons remaining beneath the site property.

2.5 *The site presents no significant risk to human health or safety.*

Remaining site conditions shall not exceed a hazard index of one, a one-in-one-million excess cancer risk (10^{-6}) for residential receptors and a one-in-one-hundred-thousand (10^{-5}) excess cancer risk for commercial receptors (including construction workers). Site representative concentrations shall either be the maximum reported concentration, the 95% upper confidence level, or the area

weighted average, as appropriate. At a minimum, exposure pathways to be considered shall include surface soil and groundwater ingestion, and surface soil, subsurface soil, and groundwater volatilization to indoor and outdoor air (via basements, buildings, subsurface utilities, etc.).

Note: The Responsible Party is required to demonstrate the acceptability of the model(s) used to determine the human health risk.

None of the identified exposure pathways are likely to be complete.

3.0 CV-RWQCB APPENDIX B CHECKLIST

3.1 *For groundwater-impacted sites, distance to production wells for municipal, domestic, agriculture, industry, and other uses within 2,000 feet of the site;*

Attached.

3.2 *Site maps, to scale, of area impacted showing locations of former and existing tank systems, excavation contours and sample locations, borings and monitoring well elevation contours, gradients, and nearby surface waters, buildings, streets, and subsurface utilities;*

Attached.

3.3 *Figures depicting lithology (cross sections), treatment system diagrams;*

Attached.

3.4 *Stockpiled soil remaining on-site or offsite disposal (quantity);*

No stockpiled or drummed soil remains on-site.

3.5 *Monitoring wells remaining on-site, fate;*

Five groundwater monitoring wells installed for this facility remain in place. The wells will remain in place until sampling is no longer required.

3.6 *Tabulated data of all groundwater elevations and depth to water;*

Attached.

3.7 *Tabulated results of all sampling and analysis;*
- *Detection limits for confirmation sampling*
- *Lead analyses*

Analytical results for petroleum hydrocarbon compounds are attached. Lead analyses are only known to have occurred during compliance soil sampling; total lead was reported at a concentration of 1.09 mg/Kg.

3.8 *Concentration contours of contaminants found and those remaining in soil and groundwater; both on-and off-site;*
- *Lateral extent of soil contamination*
- *Vertical extent of soil contamination*
- *Lateral extent of groundwater contamination*
- *Vertical extent of groundwater contamination*

Not completed. Soil analytical data is limited due to the presence of shallow bedrock beneath the site. Available soil analytical data represents analyses

performed on samples collected near or below the shallow groundwater surface beneath the site.

The low concentrations of MTBE is shallow groundwater do not appear to warrant contouring. The vertical extent of groundwater contamination was not evaluated due to the presence of bedrock and the limited extent of impact to shallow groundwater.

3.9 *Zone of influence calculated and assumptions used for the subsurface remediation system and the zone of capture attained for the soil and groundwater remediation systems.*

Not completed.

3.10 *Reports/information*

- *Unauthorized Release Form*
- *Quarterly monitoring reports*
- *Problem Assessment Report*
- *Final Remediation Plan*
- *Well and borings logs*
- *Other*

All documents should be on file with the Nevada County Health Department and the Central Valley Regional Water Quality Control Board.

3.11 *Best Available Technology (BAT) used or an explanation for not using BAT;*

Not completed.

3.12 *Reason why background was/is attainable using BAT;*

Current levels are protective.

3.13 *Mass balance calculation of the substance treated versus that remaining;*

Not completed.

3.14 *Assumptions, parameters, calculations and model used in risk assessments, and fate and transport modeling.*

Not completed.

3.15 *Rationale why conditions remaining at the site will not adversely impact groundwater quality, health, or other beneficial uses; and*

Low concentrations of residual and dissolved petroleum hydrocarbons are situated beneath a ground surface paved with asphalt and concrete. These paving materials are not impervious to soil vapors, but the potential exposure risk

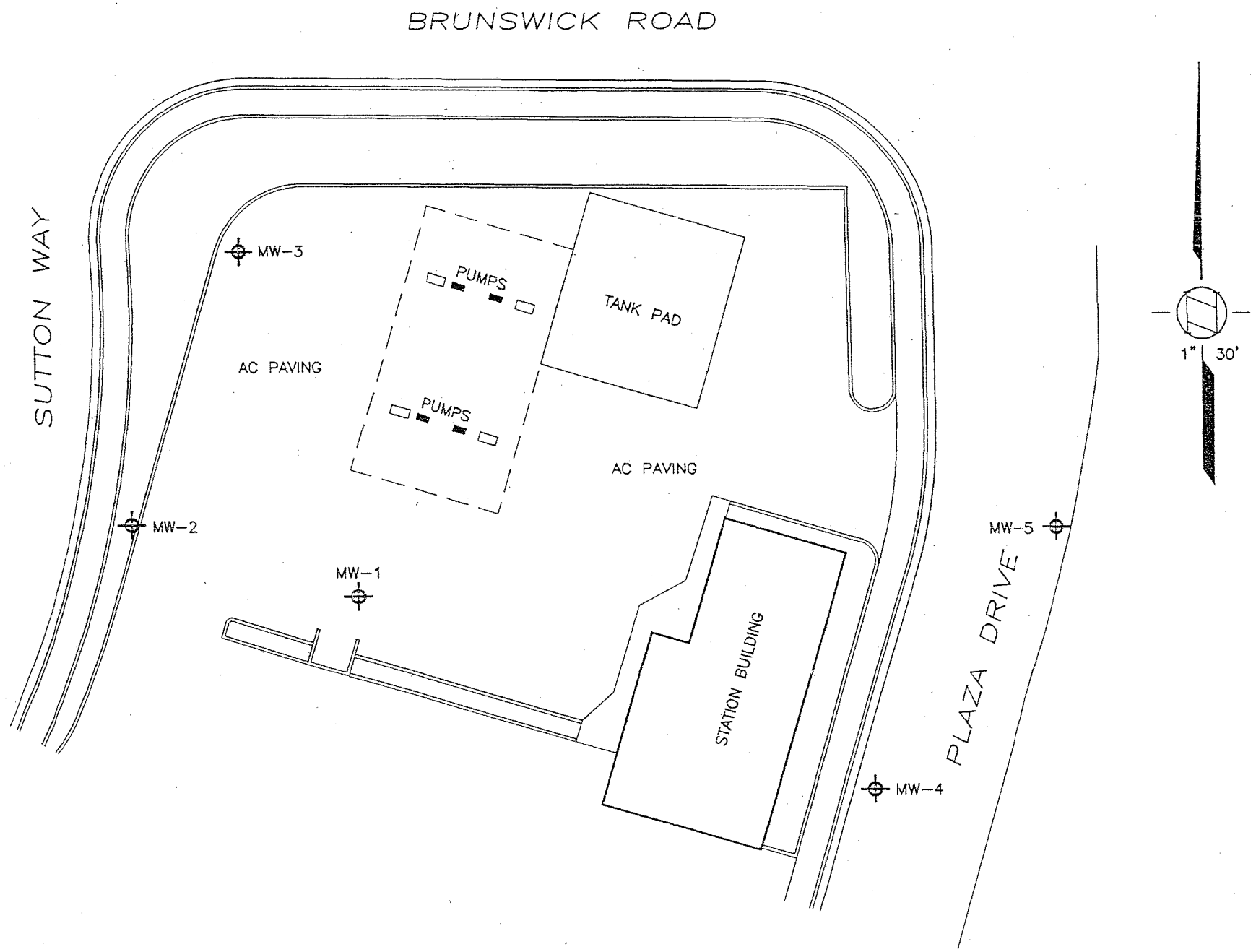
associated with volatilization of petroleum hydrocarbon vapors to indoor or outdoor air is unlikely to represent an exposure risk. Normal surface air movement is likely to dilute and remove impacted soil vapors from the site before concentrations reach risk levels.

3.16 *Waste Extraction Test (WET) or TCLP results.*

Not completed.

ATTACHMENT 1

Monitoring Well Exhibit
Prepared for:
Stratus Environmental, Inc.



DESCRIPTION	NORTHING	EASTING	ELEV (PVC)	ELEV (RIM)
MW-1	2212734.6	6835375.9	2622.22	2622.59
MW-2	2212750.3	6835326.5	2621.40	2621.44
MW-3	2212809.8	6835350.7	2622.25	2622.57
MW-4	2212692.4	6835488.0	2623.40	2623.63
MW-5	2212749.6	6835527.6	2623.95	2624.21

	LATITUDE	LONGITUDE
MW-1	39.2341469	-121.0336462
MW-2	39.2341914	-121.0338200
MW-3	39.2343541	-121.0337323
MW-4	39.2340278	-121.0332520
MW-5	39.2341836	-121.0331101

BASIS OF BEARINGS AND ELEVATIONS:

COORDINATES ARE CALIFORNIA STATE PLANE ZONE 2 COORDINATES FROM GPS OBSERVATIONS USING UNIVERSITY OF CALIFORNIA BAY AREA DEFORMATION CORS STATION OBSERVATION FILES AND BASED ON THE CALIFORNIA SPATIAL REFERENCE CENTER DATUM, REFERENCE EPOCH 2000.35.
COORDINATE DATUM IS NAD 83(1986)
DATUM ELLIPSOID IS GRS80
REFERENCE GEOID IS NGS96

VERTICAL DATUM IS FROM NEVADA COUNTY BENCH MARK NUMBER 3001 ELEVATION 2620.65 FEET.

0 15 30 60 90
SCALE IN FEET

Flyers Fueling Station #31
1008 Plaza Drive
Grass Valley
Nevada County
California

Morrow Surveying

1450 Harbor Blvd. Ste. D
West Sacramento
California 95691
(916) 372-8124
tom@morrowsurveying.com

Date: 11/13/02
Scale: 1"=30'
Sheet 1 of 1
Revised:
Field Book: MW-6
Dwg. No. 7502-016

ATTACHMENT 2

SOIL BORING LOG Boring No. MW-1 Sheet 1 of 1

Client: Nella Oil
Address: 1008 Plaza Drive, Grass Valley, California
Project No.: 2028-0031-01
Logged By: M. H. Adsetts
Date: 11/5/02
Drilling Company: Woodward Drilling rig type: BK-81
Driller: Frank Ramirez
Method: Hollow Stem Auger hole diam.: 8"

Well Pack: sand: 4.5 ft. to 20 ft.; bent.: 2.5 ft. to 4.5 ft.; grout: 0 ft. to 2.5 ft.
Well Construction: casing: PVC casing diam.: 2" screen interval: 5'-20' screen slot size: 0.02"
Depth to GW: ▽ first encountered groundwater ▼ static groundwater

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Construct.	Depth Scale	LITHO COLUMN	Descriptions of Materials and Conditions	PID (PPM)
						1		Asphalt Roadbase	
						2	ML	CLAYEY SILT, yellow-brown with rock fragments, dry, stiff	
						3			
						4			
						5			
S	MW1-6	9 9 11	12:35	80	▼	6	CL	SILTY CLAY, red-brown with rock fragments, dry, stiff	0
						7			
			12:45	20		8		COBBLES	
						9			
						10			
S	MW1-11	3 3 4	12.55	40		11	SM	SILTY SAND, 5-10% coarse sands, gray green, trace rock fragments, damp, medium dense	
						12			0
						13			
						14			
						15			
		60 (3)	12:57	20		16	B	Decomposed granodiorite	N/A
						17			
						18			
						19			
						20			

Comments: Total depth of boring is 20 feet bgs. Set well.

STRATUS ENVIRONMENTAL, INC.

SOIL BORING LOG Boring No. MW-2 Sheet 1 of 1

Client	Nella Oil	Date	11/5/02
Address	1008 Plaza Drive	Drilling Company	Woodward Drilling rig type: BK-81
	Grass Valley, California	Driller	Frank Ramirez
Project No.	2028-0031-01	Method	Hollow Stem Auger hole diam.: 8"
Logged By:	M. H. Adsetts		

Well Pack	sand: 4 ft. to 19.5 ft.	Well Construction	casing: PVC screen interval: 4.5'-19.5'
	bent.: 2 ft. to 4 ft.		casing diam.: 2" screen slot size: 0.02"
	grout: 0 ft. to 2 ft.	Depth to GW:	▽ first encountered groundwater ▼ static groundwater

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Construct.	Depth Scale	LITHO COLUMN	Descriptions of Materials and Conditions	PID (PPM)
						1	landscape dirt	Drilling in planter	
						2	ML	SILT with COBBLES	
						3			
						4			
						5			
S	MW2-6	7 7 14	14.10	80	▼	6	CL	SANDY CLAY with SILT, green gray with decomposed granodiorite, damp	0
						7			
		50 (6)	14.15	20		8		Decomposed granodiorite, green gray, dry, hard (with 20% brown-red silt)	0
						9			
						10	B	Decomposed granodiorite	N/A
		50 (6)	14.20	20		11			
						12			
						13			
						14			
						15			
						16			
						17			
						18			
						19			
						20			

Comments: Total depth of boring is 19.5 feet bgs. Set well.

STRATUS ENVIRONMENTAL, INC.

SOIL BORING LOG Boring No. MW-3 Sheet 1 of 1

Client: Nella Oil Date: 11/5/02
Address: 1008 Plaza Drive Drilling Company: Woodward Drilling rig type: BK-81
Grass Valley, California Driller: Frank Ramirez
Project No.: 2028-0031-01 Method: Hollow Stem Auger hole diam.: 8"
Logged By: M. H. Adsetts

Well Pack: sand: 4.5 ft. to 20 ft. Well Construction: casing: PVC screen interval: 5'-20'
bent.: 2.5 ft. to 4.5 ft. casing diam.: 2" screen slot size: 0.02"
grout: 0 ft. to 2.5 ft. Depth to GW: ▽ first encountered groundwater ▼ static groundwater

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Construct.	Depth Scale	LITHO COLUMN	Descriptions of Materials and Conditions	PID (PPM)
						1		Asphalt Roadbase	
						2	ML	SILT with COBBLES	
						3			
						4	ML	CLAYEY SILT, grey-brown, dry, stiff	
						5			
S	MW3-6	3 3	15.45	40		6	ML	CLAYEY SILT, red-brown, dry, stiff	0
		9			▼	7	CL	SILTY CLAY, gray green, damp, stiff	
		9				8			
S	MW3-9	9 16	15.50	95		9	B	Decomposed granodiorite, green gray, dry, stiff	N/A
						10			
S	MW3-10	50(6)	15.55	70		11		Decomposed granodiorite, red brown, dry, stiff	N/A
						12			
						13			
						14			
						15			
S	MW3-15	39 50 (4)	16.00	40		16		Decomposed granodiorite, yellow brown, dry, hard	N/A
						17			
						18			
						19			
						20			

Comments: Total depth of boring is 20 feet bgs. Set well.

STRATUS ENVIRONMENTAL, INC.

SOIL BORING LOG Boring No. MW-4 Sheet 1 of 1

Client	Nella Oil	Date	11/5/02
Address	331 Brunswick Rd.	Drilling Company	Woodward Drilling rig type: BK-81
	Grass Valley, California	Driller	Frank Ramirez
Project No.	2028-0031-01	Method	Hollow Stem Auger hole diam.: 8"
Logged By:	Scott Bittinger		

Well Pack	sand: 4 ft. to 20 ft.	Well Construction	casing: PVC screen interval: 5'-20'
	bent.: 3 ft. to 4 ft.		casing diam.: 2" screen slot size: 0.02"
	grout: 0 ft. to 3 ft.	Depth to GW:	▽ first encountered groundwater ▼ static groundwater

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Construct.	Depth Scale	LITHO COLUMN	Descriptions of Materials and Conditions	PID (PPM)
						1		Asphalt Roadbase	
						2		SILT with COBBLES	
						3	ML	CLAYEY SILT, yellow brown, dry, stiff	
						4			
						5	CL	SILTY CLAY, brown, dry, medium stiff	
S	MW4-6	8 8 9	9.05	50	▼	6	CL	SILTY CLAY, brown, dry, medium stiff, 5% rock fragments	4
						7			
						8			
						9			
						10			
S	MW4-11	12 17 32	9.12	75		11	ML	SILT 10'-10.8', yellow brown, trace white calcite, dry, stiff	0
						12	B	Decomposed granodiorite 10.8'-11.3', dark brown staining 10.8-11.1', dry	
						13			
						14			
						15			
S	MW4-15	55 (6)	9.21	40		16	B	Decomposed granodiorite, dry	N/A
						17			
						18			
						19			
						20			

Comments: Total depth of boring is 20 feet bgs. Set well.

STRATUS ENVIRONMENTAL, INC

SOIL BORING LOG Boring No. MW-5 Sheet 1 of 1

Client: Nella Oil
Address: 331 Brunswick Road, Grass Valley, California
Project No.: 2028-0031-01
Logged By: M.H. Adsetts
Date: 11/5/02
Drilling Company: Woodward Drilling rig type: BK-81
Driller: Frank Ramirez
Method: Hollow Stem Auger hole diam.: 8"

Well Pack: sand: 4.5 ft. to 20 ft.; bent.: 2.5 ft. to 4.5 ft.; grout: 0 ft. to 2.5 ft.
Well Construction: casing: PVC screen interval: 5'-20'; casing diam.: 2" screen slot size: 0.02"
Depth to GW: ▽ first encountered groundwater ▼ static groundwater

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Construct.	Depth Scale	LITHO COLUMN	Descriptions of Materials and Conditions	PID (PPM)
						1		Asphalt Roadbase	
			10.30			2	ML	CLAYEY SILT, yellow brown, dry, stiff, 5% rock fragments	
						3			
						4	CL	SILTY CLAY, red brown, dry, stiff, 30% rock fragments	
						5			
		50 (6)	10.40	25		6	CL	SILTY CLAY, red brown, dry, stiff, 25% rock fragments	
					▼	7			
		19				8			
S	MW5-9	21 27	10.45	75		9	ML	CLAYEY SILT, gray green (GLEY1-5/2), dry, medium stiff, trace decomposed granodiorite	0
						10			
		9 9				11			
S	MW5-11	12	10.50	70		12	B	Decomposed granodiorite, gray green with 20% red silt, dry, stiff	N/A
						13			
						14			
		50 (3)	11.00	20		15	B	Decomposed granodiorite, dry, hard	N/A
						16			
						17			
						18			
						19			
						20			

Comments: Total depth of boring is 20 feet bgs. Set well.

STRATUS ENVIRONMENTAL, INC.

WELL DETAILS

PROJECT NUMBER 2028-31-1

PROJECT NAME Nella Oil Station 31

LOCATION 1008 Plaza Dr., Grass Valley

WELL PERMIT NO. 21-00513

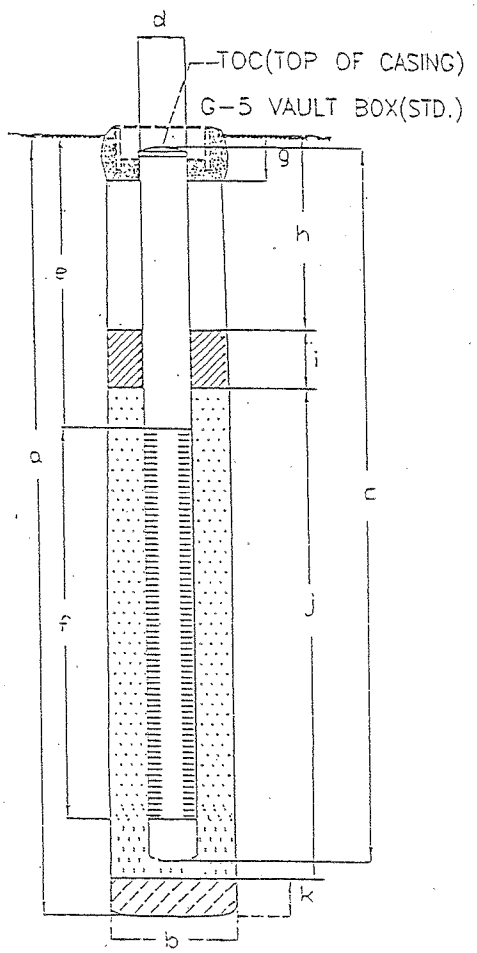
BORING/WELL NO. MW-1

TOP OF CASING ELEV. 2622.22'

GROUND SURFACE ELEV. 2622.59'

DATUM Nevada County BM 3001

INSTALLATION DATE 11-5-02



BENTONITE

CEMENT

CONCRETE

SAND

PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 20 ft.

b. DIAMETER 8 in.

DRILLING METHOD hollow stem auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 20 ft.

MATERIAL schedule 40 pvc

d. DIAMETER 2 in.

e. DEPTH TO TOP PERFORATIONS 5 ft.

f. PERFORATED

INTERVAL FROM 5 TO 20 ft.

PERFORATION TYPE slotted

PERFORATION SIZE 0.02"

g. SURFACE SEAL 0'-1'

SEAL MATERIAL concrete

h. BACKFILL 1'-2.5'

BACKFILL MATERIAL neat cement

i. SEAL 2.5'-4.5'

SEAL MATERIAL bentonite

j. FILTER PACK 4.5'-20'

FILTER PACK MATERIAL #3 sand

k. BOTTOM SEAL none

SEAL MATERIAL

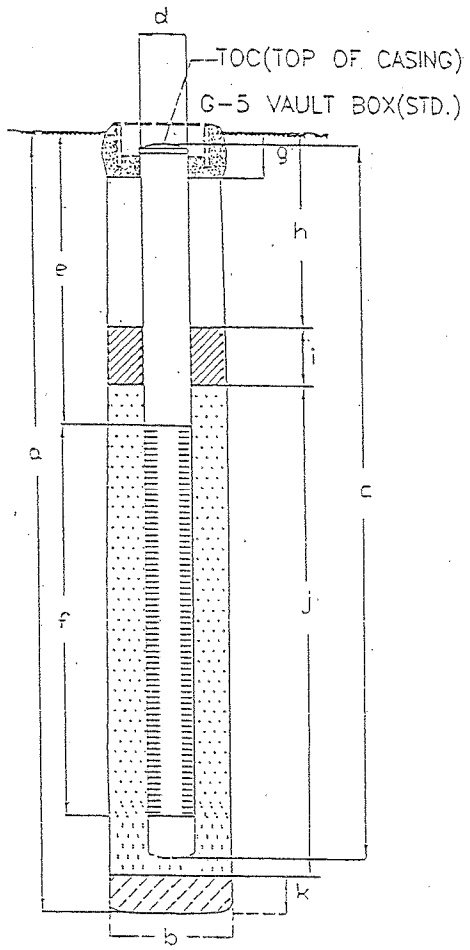
PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____

WELL DETAILS

PROJECT NUMBER 2028-31-1
PROJECT NAME Nella Oil Station 31
LOCATION 1008 Plaza Dr., Grass Valley
WELL PERMIT NO. 21-00513

BORING/WELL NO. MW-2
TOP OF CASING ELEV. 2621.40'
GROUND SURFACE ELEV. 2621.44'
DATUM Nevada County BM 3001
INSTALLATION DATE 11-5-02



BENTONITE
CEMENT
CONCRETE
SAND
PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 19.5 ft.
b. DIAMETER 8 in.
DRILLING METHOD hollow stem auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 19.5 ft.
MATERIAL schedule 40 pvc
d. DIAMETER 2 in.
e. DEPTH TO TOP PERFORATIONS 4.5 ft.
f. PERFORATED
INTERVAL FROM 4.5 TO 19.5 ft.
PERFORATION TYPE slotted
PERFORATION SIZE 0.02"
g. SURFACE SEAL 0'-1'
SEAL MATERIAL concrete
h. BACKFILL 1'-2'
BACKFILL MATERIAL neat cement
i. SEAL 2'-4'
SEAL MATERIAL bentonite
j. FILTER PACK 4'-19.5'
FILTER PACK MATERIAL #3 sand
k. BOTTOM SEAL none
SEAL MATERIAL

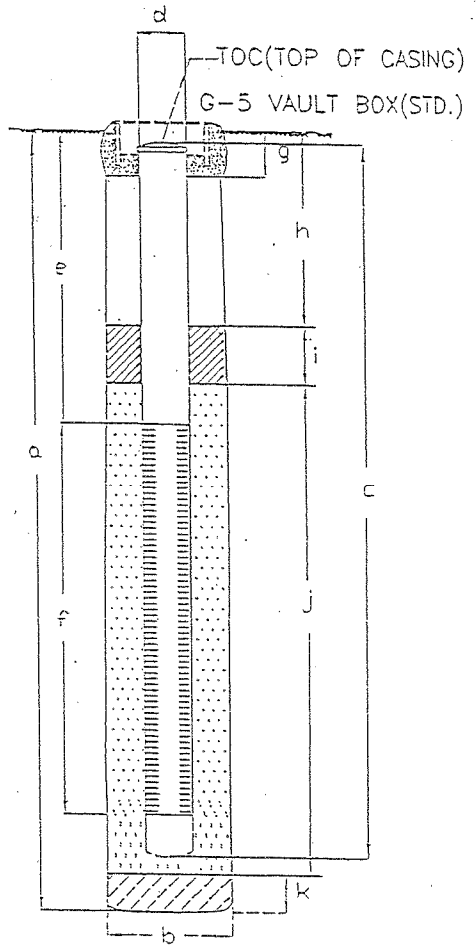
PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____

WELL DETAILS

PROJECT NUMBER 2028-31-1
PROJECT NAME Nella Oil Station 31
LOCATION 1008 Plaza Dr., Grass Valley
WELL PERMIT NO. 21-00513

BORING/WELL NO. MW-3
TOP OF CASING ELEV. 2622.25'
GROUND SURFACE ELEV. 2622.57'
DATUM Nevada County BM 3001
INSTALLATION DATE 11-5-02



BENTONITE
CEMENT
CONCRETE
SAND
PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 20 ft.
b. DIAMETER 8 in.
DRILLING METHOD hollow stem auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 20 ft.
MATERIAL schedule 40 pvc
d. DIAMETER 2 in.
e. DEPTH TO TOP PERFORATIONS 5 ft.
f. PERFORATED
INTERVAL FROM 5 TO 20 ft.
PERFORATION TYPE slotted
PERFORATION SIZE 0.02"
g. SURFACE SEAL 0'-1'
SEAL MATERIAL concrete
h. BACKFILL 1'-2.5'
BACKFILL MATERIAL neat cement
i. SEAL 2.5'-4.5'
SEAL MATERIAL bentonite
j. FILTER PACK 4.5'-20'
FILTER PACK MATERIAL #3 sand
k. BOTTOM SEAL none
SEAL MATERIAL

PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____

WELL DETAILS

PROJECT NUMBER 2028-31-1

PROJECT NAME Nella Oil Station 31

LOCATION 331 Brunswick Rd., Grass Valley

WELL PERMIT NO. 21-00514

BORING/WELL NO. MW-4

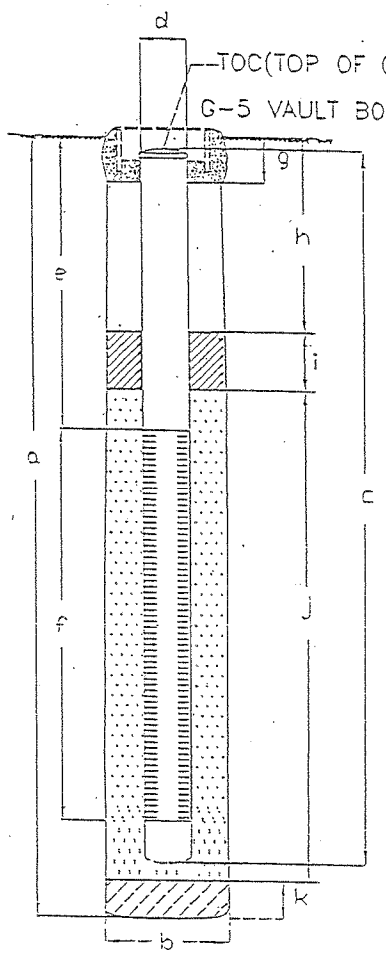
TOP OF CASING ELEV. 2623.40'

GROUND SURFACE ELEV. 2623.63'

DATUM Nevada County BM 3001

INSTALLATION DATE 11-5-02

Well installed on Plaza Drive, a private road located on a land parcel identified as 331 Brunswick Road.



BENTONITE

CONCRETE

CEMENT

SAND

PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 20 ft.

b. DIAMETER 8 in.

DRILLING METHOD hollow stem auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 20 ft.

MATERIAL schedule 40 PVC

d. DIAMETER 2 in.

e. DEPTH TO TOP PERFORATIONS 5 ft.

f. PERFORATED

INTERVAL FROM 5 TO 20 ft.

PERFORATION TYPE slotted

PERFORATION SIZE 0.02"

g. SURFACE SEAL 0'-1'

SEAL MATERIAL concrete

h. BACKFILL 1'-3'

BACKFILL MATERIAL neat cement

i. SEAL 3'-4'

SEAL MATERIAL bentonite

j. FILTER PACK 4'-20'

FILTER PACK MATERIAL #3 sand

k. BOTTOM SEAL none

SEAL MATERIAL

PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____

WELL DETAILS

PROJECT NUMBER 2028-31-1

PROJECT NAME Nella Oil Station 31

LOCATION 331 Brunswick Rd., Grass Valley

WELL PERMIT NO. 21-00514

BORING/WELL NO. MW-5

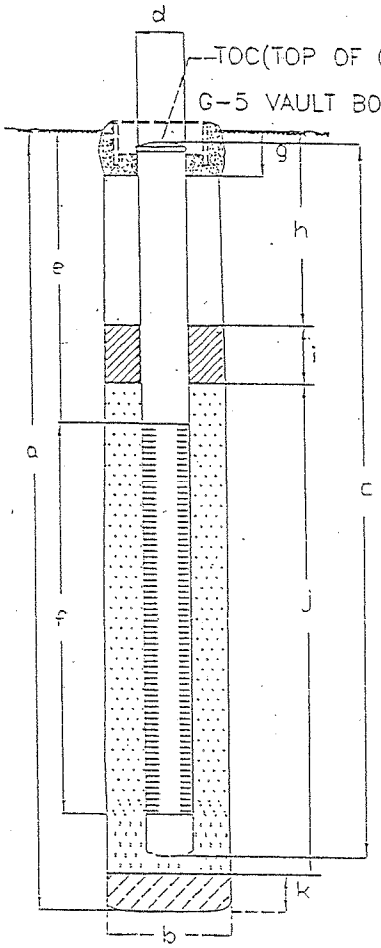
TOP OF CASING ELEV. 2623.95'

GROUND SURFACE ELEV. 2624.21'

DATUM Nevada County BM 3001

INSTALLATION DATE 11-5-02

Well installed on Plaza Drive, a private road located on a land parcel identified as 331 Brunswick Road.



BENTONITE

CONCRETE

CEMENT

SAND

PERFORATION

NOT TO SCALE

EXPLORATORY BORING

a. TOTAL DEPTH 20 ft.

b. DIAMETER 8 in.

DRILLING METHOD hollow stem auger

WELL CONSTRUCTION

c. TOTAL CASING LENGTH 20 ft.

MATERIAL schedule 40 PVC

d. DIAMETER 2 in.

e. DEPTH TO TOP PERFORATIONS 5 ft.

f. PERFORATED

INTERVAL FROM 5 TO 20 ft.

PERFORATION TYPE slotted

PERFORATION SIZE 0.02"

g. SURFACE SEAL 0'-1'

SEAL MATERIAL concrete

h. BACKFILL 1'-2.5'

BACKFILL MATERIAL neat cement

i. SEAL 2.5'-4.5'

SEAL MATERIAL bentonite

j. FILTER PACK 4.5'-20'

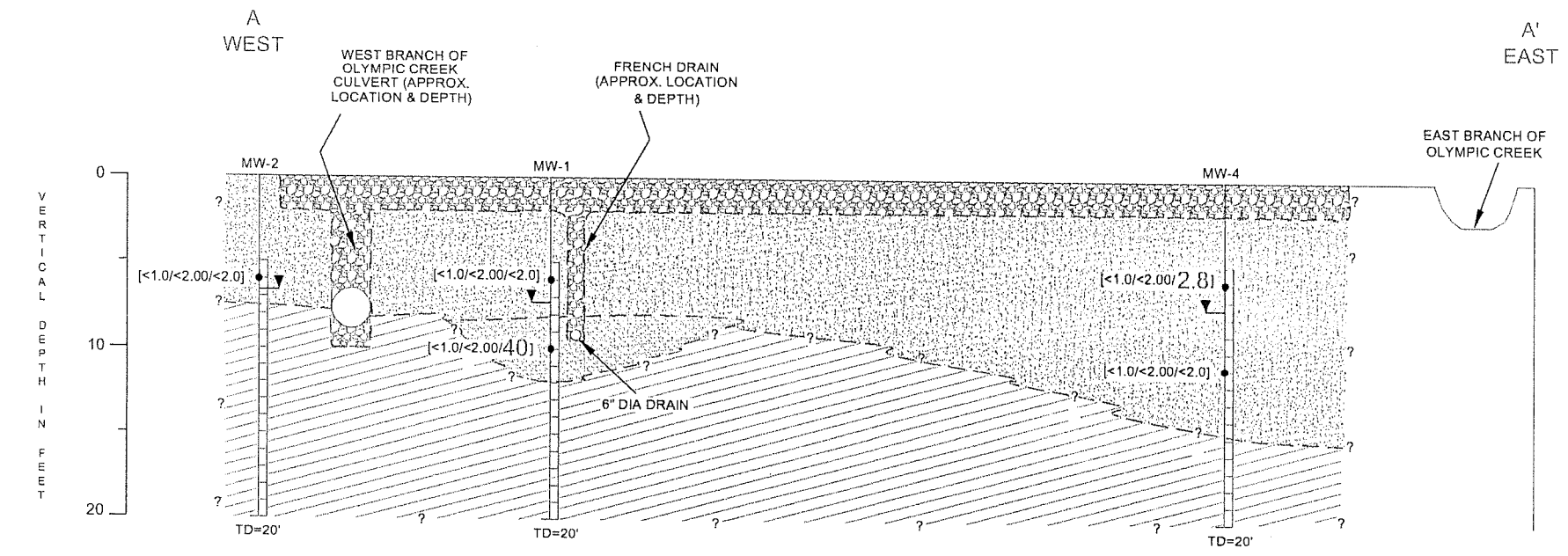
FILTER PACK MATERIAL #3 sand

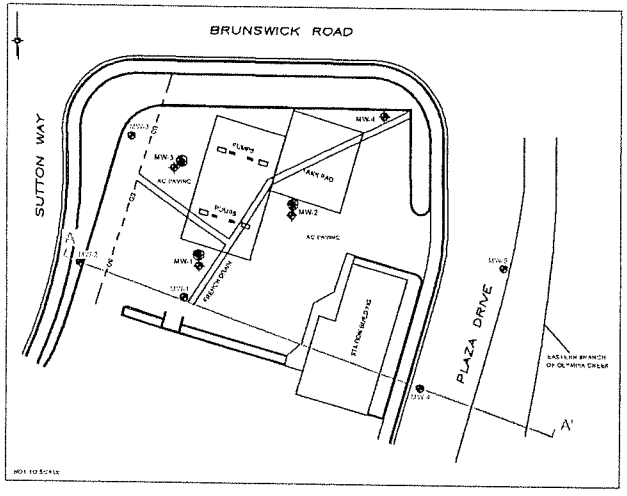
k. BOTTOM SEAL none

SEAL MATERIAL

PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____





LEGEND:

DEPTH TO GROUNDWATER (11/08/02)

SOIL SAMPLE LOCATION

[<1.0/<2.0/<2.0] TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (mg/Kg), BENZENE (µg/Kg), & METHYL TERTIARY BUTYL ETHER CONCENTRATION (µg/Kg)

SCREENED INTERVAL

TD=20' TOTAL DEPTH IN FEET BELOW SURFACE GRADE

? GEOLOGIC CONTACT BETWEEN SOIL TYPES QUERIED WHERE UNCERTAIN

FILL COBBLES/ROAD BASE GRAVEL

SILT, CLAYEY SILT, SILTY CLAY, & SANDY CLAY

DECOMPOSED GRANODIORITE (BEDROCK)

SILTY SAND

VERT. SCALE 0 10 FT

0 30 FT HORZ. SCALE

STRATUS ENVIRONMENTAL, INC.

FLYERS FUELING STATION NO. 31
1008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

GEOLOGIC CROSS SECTION A-A'

FIGURE
3

PROJECT NO.
2028-31-01

ATTACHMENT 3

TABLE 1
Soil Analytical Results
Nella Oil Station 31
1008 Plaza Drive
Grass Valley, California
November 5, 2002

Sample ID	Sample Depth (feet bgs)	TPHG (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethylbenzene (µg/Kg)	Xylenes [1] (µg/Kg)	MTBE (µg/Kg)	TBA (µg/Kg)	DIPE (µg/Kg)	ETBE (µg/Kg)	TAME (µg/Kg)
Boring MW-1											
MW1-6	6	<1.0	<2.00	<2.00	<2.00	<2.00	<2.0	<10	<5.0	<5.0	<5.0
MW1-10	10	<1.0	<2.00	<2.00	<2.00	<2.00	**40**	<10	<5.0	<5.0	<5.0
Boring MW-2											
MW2-6	6	<1.0	<2.00	<2.00	<2.00	<2.00	<2.0	<10	<5.0	<5.0	<5.0
Boring MW-3											
MW3-6	6	<1.0	<2.00	<2.00	<2.00	<2.00	**14**	<10	<5.0	<5.0	<5.0
MW3-9	9	<1.0	<2.00	<2.00	<2.00	<2.00	**2.2**	<10	<5.0	<5.0	<5.0
MW3-10	10	<1.0	<2.00	<2.00	<2.00	<2.00	**5.2**	<10	<5.0	<5.0	<5.0
Boring MW-4											
MW4-6	6	<1.0	<2.00	<2.00	<2.00	<2.00	**2.8**	<10	<5.0	<5.0	<5.0
MW4-11	11	<1.0	<2.00	<2.00	<2.00	<2.00	<2.0	<10	<5.0	<5.0	<5.0
Boring MW-5											
MW5-9	9	<1.0	<2.00	<2.00	<2.00	<2.00	<2.0	<10	<5.0	<5.0	<5.0
MW5-11	11	<1.0	<2.00	<2.00	<2.00	<2.00	<2.0	<10	<5.0	<5.0	<5.0

TABLE 1
Soil Analytical Results
Nella Oil Station 31
1008 Plaza Drive
Grass Valley, California
November 5, 2002

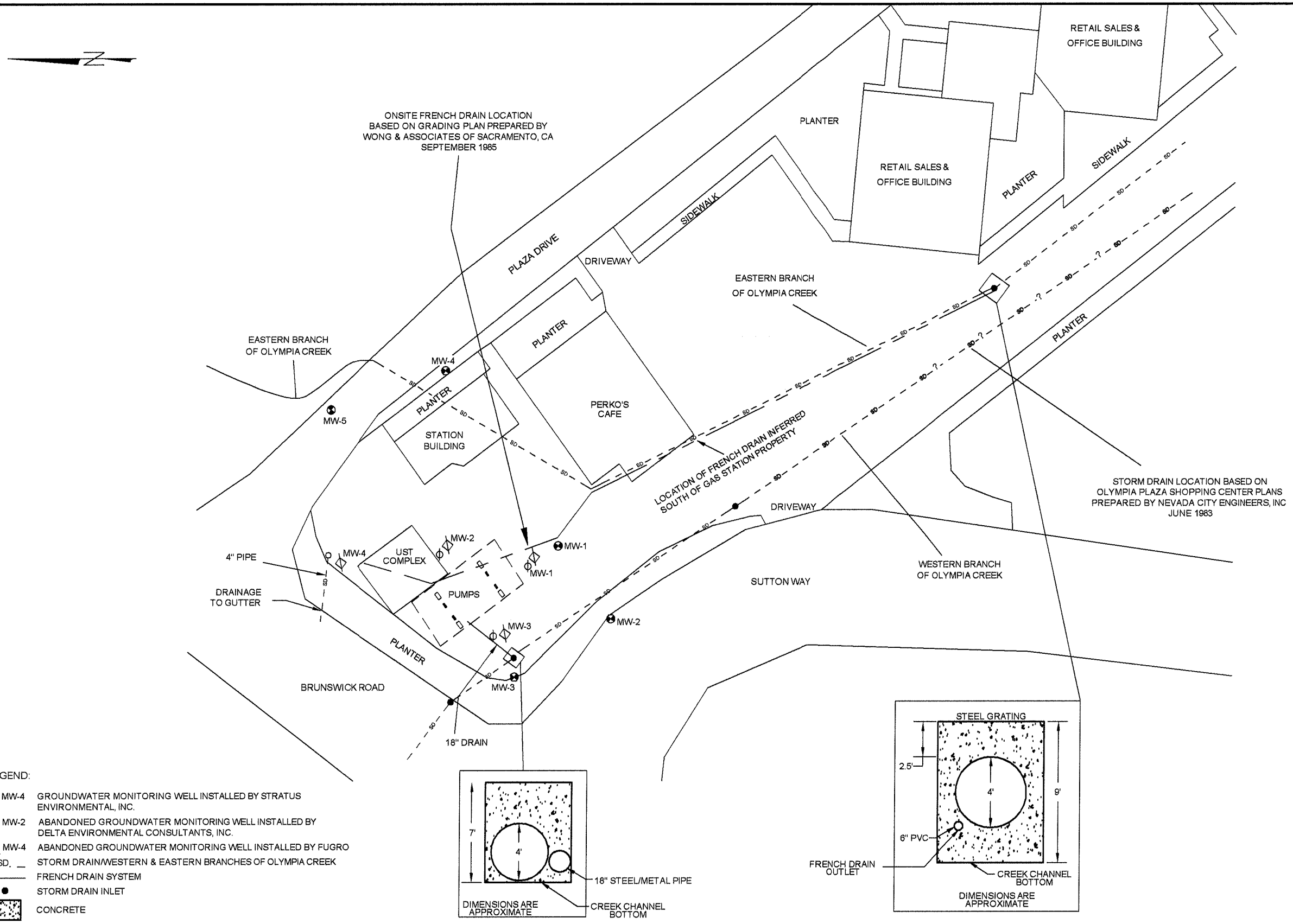
Sample ID	Sample Depth (feet bgs)	TPHG (mg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethylbenzene (µg/Kg)	Xylenes [1] (µg/Kg)	MTBE (µg/Kg)	TBA (µg/Kg)	DIPE (µg/Kg)	ETBE (µg/Kg)	TAME (µg/Kg)

Explanation
TPHG = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tert-butyl ether
DIPE = Di-isopropyl ether
TBA = Tertiary butyl alcohol
ETBE = Ethyl tert butyl ether
TAME = Tertiary amyl methyl ether
1 = Total Xylenes
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram

Analytical Methods
TPHG = EPA Method 8015 Modified DHS
BTEX, MTBE, TBA, TAME, DIPE, and ETBE = EPA Method 8260B

Analytical Laboratory
Sparger Technology, Inc. (ELAP #1614)

ATTACHMENT 4



STRATUS
ENVIRONMENTAL, INC.

0 60 FT
HORZ. SCALE

NELLA OIL STATION NO. 31
12008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

SITE PLAN

FIGURE

PROJECT NO.
2028-31-01

Nella Oil/Grass Valley/Closure JMP REV Aug 04, 2005 Nella Oil New Site Plan.dwg

ATTACHMENT 5

TABLE 1

GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY

Nella Oil Company Station No. 31

12008 Plaza Drive, Grass Valley, CA

Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater Elevation (ft msl)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-1	11/08/02	7.30	2622.22	2614.92	<50	<0.50	<0.50	<0.50	<0.50	200
	05/13/03	6.74		2615.48	<50	<0.50	<0.50	<0.50	<1.0	25
	09/03/03	7.54		2614.68	<50[1]	<0.50	<0.50	<0.50	<1.0	150
	12/29/03	7.34		2614.88	<50[1]	<0.50	<0.50	<0.50	<1.0	55
	03/22/04	5.28		2616.94	<50[1]	<0.50	<0.50	<0.50	<1.0	13
	06/02/04	6.57		2615.65	<50[1]	<0.50	<0.50	<0.50	<1.0	26
	08/31/04	7.69		2614.53	<50	<0.50	<0.50	<0.50	<1.0	72
	12/03/04	6.90		2615.32	160	<0.50	<0.50	<0.50	<1.0	72
	03/14/05	7.11		2615.11	<50	<0.50	<0.50	<0.50	<0.50	27
	06/03/05	7.23		2614.99	<50[1]	<0.50	<0.50	<0.50	<0.50	5.1
MW-2	11/08/02	6.62	2621.40	2614.78	<50	<0.50	<0.50	<0.50	<0.50	91
	05/13/03	6.12		2615.28	<50	<0.50	<0.50	<0.50	<1.0	40
	09/03/03	6.33		2615.07	<50[1]	<0.50	<0.50	<0.50	<1.0	54
	12/29/03	6.69		2614.71	<50[1]	<0.50	<0.50	<0.50	<1.0	19
	03/22/04	4.58		2616.82	<50[1]	<0.50	<0.50	<0.50	<1.0	18
	06/02/04	6.19		2615.21	<50[1]	<0.50	<0.50	<0.50	<1.0	<1.0
	08/31/04	6.68		2614.72	<50	<0.50	<0.50	<0.50	<1.0	29
	12/03/04	6.34		2615.06	56	<0.50	<0.50	<0.50	<1.0	24
	03/14/05	5.87		2615.53	<50	<0.50	<0.50	<0.50	<0.50	9.6
	06/03/05	5.71		2615.69	<50[1]	<0.50	<0.50	<0.50	<0.50	6.0

TABLE 1

GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY

Nella Oil Company Station No. 31

12008 Plaza Drive, Grass Valley, CA

Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater Elevation (ft msl)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-3	11/08/02	6.58	2622.25	2615.67	<50	<0.50	<0.50	<0.50	<0.50	23
	05/13/03	6.43		2615.82	<50	<0.50	<0.50	<0.50	<1.0	14
	09/03/03	6.71		2615.54	<50[1]	<0.50	<0.50	<0.50	<1.0	19
	12/29/03	6.66		2615.59	<50[1]	<0.50	<0.50	<0.50	<1.0	24
	03/22/04	4.71		2617.54	<50[1]	<0.50	<0.50	<0.50	<1.0	16
	06/02/04	6.60		2615.65	<50[1]	<0.50	<0.50	<0.50	<1.0	15
	08/31/04	6.70		2615.55	<50	<0.50	<0.50	<0.50	<1.0	9.5
	12/03/04	6.53		2615.72	70	<0.50	<0.50	<0.50	<1.0	13
	03/14/05	6.45		2615.80	<50	<0.50	<0.50	<0.50	<0.50	12
	06/03/05	6.51		2615.74	<50[1]	<0.50	<0.50	<0.50	<0.50	11
MW-4	11/08/02	7.45	2623.40	2615.95	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	05/13/03	5.08		2618.32	<50	<0.50	<0.50	<0.50	<1.0	<0.50
	09/03/03	6.68		2616.72	<50[1]	<0.50	<0.50	<0.50	<1.0	<1.0
	12/29/03	7.51		2615.89	<50[1]	<0.50	<0.50	<0.50	<1.0	<1.0
	03/22/04	5.41		2617.99	<50[1]	<0.50	<0.50	<0.50	<1.0	<1.0
	06/02/04	6.09		2617.31	<50[1]	<0.50	<0.50	<0.50	<1.0	<1.0
	08/31/04	7.27		2616.13	<50	<0.50	<0.50	<0.50	<1.0	<1.0
	12/03/04	6.78		2616.62	<50	<0.50	<0.50	<0.50	<1.0	<1.0
	03/14/05	5.80		2617.60				Not Sampled		
	06/03/05	5.32		2618.08	<50[1]	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE 1

GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY

Nella Oil Company Station No. 31

12008 Plaza Drive, Grass Valley, CA

Well Number	Date Collected	Depth to Water (feet)	Well Elevation (ft msl)	Groundwater Elevation (ft msl)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-5	11/08/02	6.98	2623.95	2616.97	<50	<0.50	<0.50	<0.50	<0.50	<0.50
	05/13/03	6.16		2617.79	<50	<0.50	<0.50	<0.50	<1.0	<0.50
	09/03/03	6.61		2617.34	<50[1]	<0.50	<0.50	<0.50	<1.0	<1.0
	12/29/03	7.06		2616.89	<50[1]	<0.50	<0.50	<0.50	<1.0	<1.0
	03/22/04	5.01		2618.94	<50[1]	<0.50	<0.50	<0.50	<1.0	<1.0
	06/02/04	5.92		2618.03	<50[1]	<0.50	<0.50	<0.50	<1.0	<1.0
	08/31/04	7.17		2616.78	<50	<0.50	<0.50	<0.50	<1.0	<1.0
	12/03/04	6.60		2617.35	<50	<0.50	<0.50	<0.50	<1.0	<1.0
	03/14/05	5.55		2618.40	Not Sampled					
	06/03/05	5.52		2618.43	<50[1]	<0.50	<0.50	<0.50	<0.50	<0.50

Note:

GRO = Gasoline Range Organics (C6-C12)

GRO analyzed using EPA Method 8015B/8015M and the remaining analytes using EPA Method 8260B

MTBE = Methyl tertiary butyl ether

[1] GRO analyzed using EPA Method 8260B

msl = Mean sea level

µg/L = micrograms per liter

NM = Not measured

NS = Not sampled

NA = Not analyzed

TABLE 2

GROUNDWATER ANALYTICAL RESULTS FOR OXYGENATES AND ADDITIONAL COMPOUNDS

Nella Oil Company Station No. 31
12008 Plaza Drive, Grass Valley, CA

Well Number	Date Collected	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)
MW-1	11/08/02	<5.0	200	<0.50	<0.50	<0.50	NA	<2.0
	05/13/03	<5.0	25	<1.0	<1.0	<1.0	<5.0	<0.50
	09/03/03	<5.0	150	<1.0	<1.0	<1.0	NA	<1.0
	12/29/03	<10	55	<2.0	<2.0	<2.0	NA	<0.50
	03/22/04	<10	13	<2.0	<2.0	<2.0	NA	<0.50
	06/02/04	<10	26	<2.0	<2.0	<2.0	NA	<0.50
	08/31/04	<10	72	<2.0	<2.0	<2.0	NA	<0.50
	12/03/04	<10	72	<2.0	<2.0	<2.0	NA	<0.50
	03/14/05	<5.0	27	<0.50	<0.50	<0.50	NA	<0.50
	06/03/05	<5.0	5.1	<0.50	<0.50	<0.50	NA	<0.50
MW-2	11/08/02	<5.0	91	<0.50	<0.50	<0.50	NA	<2.0
	05/13/03	<5.0	40	<1.0	<1.0	<1.0	<5.0	<0.50
	09/03/03	<5.0	54	<1.0	<1.0	<1.0	NA	<1.0
	12/29/03	<10	19	<2.0	<2.0	<2.0	NA	<0.50
	03/22/04	<10	18	<2.0	<2.0	<2.0	NA	<0.50
	06/02/04	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	08/31/04	<10	29	<2.0	<2.0	<2.0	NA	<0.50
	12/03/04	<10	24	<2.0	<2.0	<2.0	NA	<0.50
	03/14/05	<5.0	9.6	<0.50	<0.50	<0.50	NA	<0.50
	06/03/05	<5.0	6.0	<0.50	<0.50	<0.50	NA	<0.50

TABLE 2

GROUNDWATER ANALYTICAL RESULTS FOR OXYGENATES AND ADDITIONAL COMPOUNDS

Nella Oil Company Station No. 31
12008 Plaza Drive, Grass Valley, CA

Well Number	Date Collected	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)
MW-3	11/08/02	<5.0	23	<0.50	<0.50	<0.50	NA	<2.0
	05/13/03	<5.0	14	<1.0	<1.0	<1.0	<5.0	<0.50
	09/03/03	<5.0	19	<1.0	<1.0	<1.0	NA	<1.0
	12/29/03	<10	24	<2.0	<2.0	<2.0	NA	<0.50
	03/22/04	<10	16	<2.0	<2.0	<2.0	NA	<0.50
	06/02/04	<10	15	<2.0	<2.0	<2.0	NA	<0.50
	08/31/04	<10	9.5	<2.0	<2.0	<2.0	NA	<0.50
	12/03/04	<10	13	<2.0	<2.0	<2.0	NA	<0.50
	03/14/05	<5.0	12	<0.50	<0.50	<0.50	NA	<0.50
	06/03/05	<5.0	11	<0.50	<0.50	<0.50	NA	<0.50
MW-4	11/08/02	<5.0	<0.50	<0.50	<0.50	<0.50	NA	<2.0
	05/13/03	<5.0	<0.50	<1.0	<1.0	<1.0	<5.0	<0.50
	09/03/03	<5.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0
	12/29/03	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	03/22/04	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	06/02/04	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	08/31/04	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	12/03/04	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	03/14/05				Not Sampled			
	06/03/05	<5.0	<0.50	<0.50	<0.50	<0.50	NA	<0.50

TABLE 2

GROUNDWATER ANALYTICAL RESULTS
FOR OXYGENATES AND ADDITIONAL COMPOUNDS

Nella Oil Company Station No. 31
12008 Plaza Drive, Grass Valley, CA

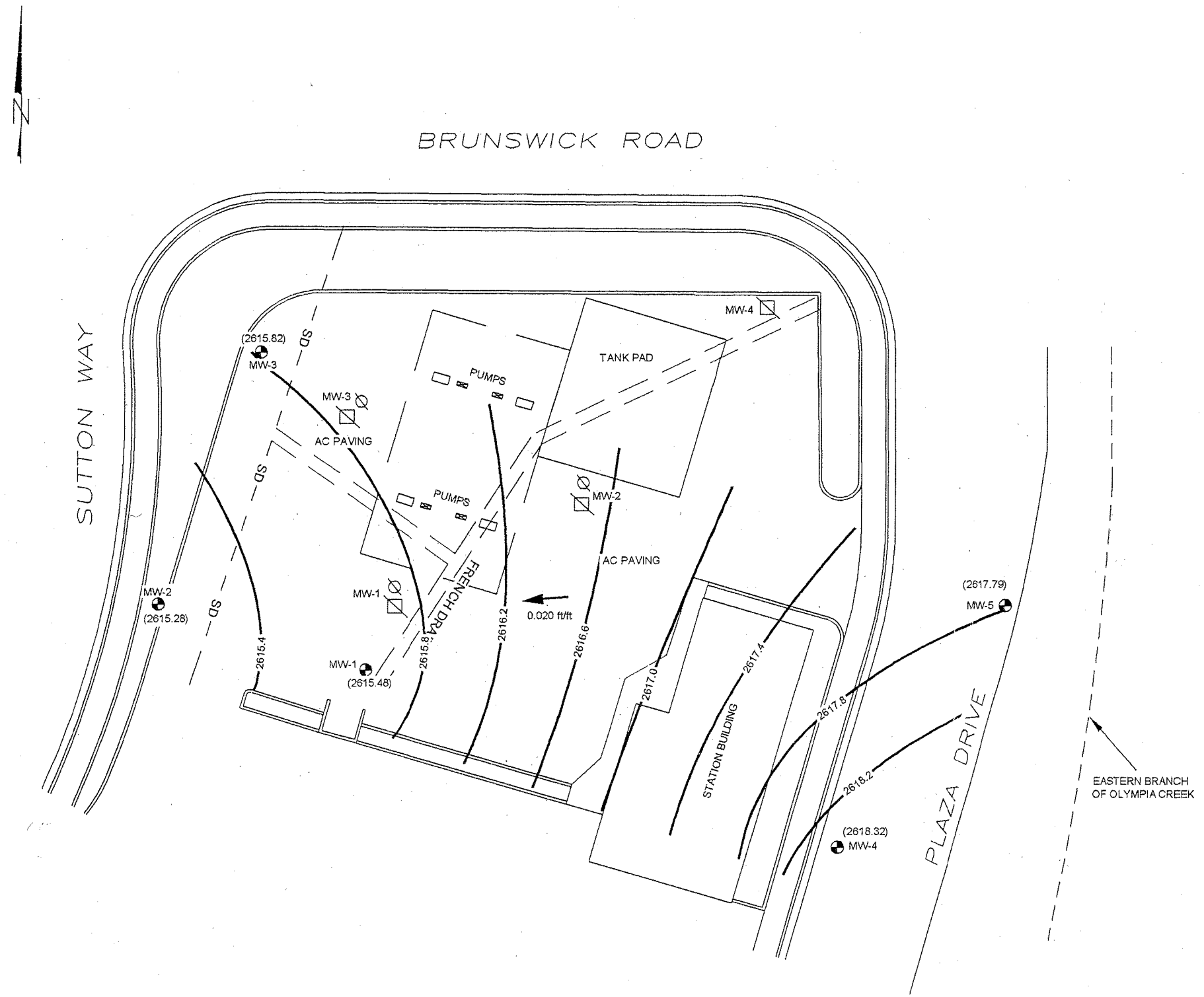
Well Number	Date Collected	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)
MW-5	11/08/02	<5.0	<0.50	<0.50	<0.50	<0.50	NA	<2.0
	05/13/03	<5.0	<0.50	<1.0	<1.0	<1.0	<5.0	<0.50
	09/03/03	<5.0	<1.0	<1.0	<1.0	<1.0	NA	<1.0
	12/29/03	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	03/22/04	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	06/02/04	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	08/31/04	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	12/03/04	<10	<1.0	<2.0	<2.0	<2.0	NA	<0.50
	03/14/05				Not Sampled			
	06/03/05	<5.0	<0.50	<0.50	<0.50	<0.50	NA	<0.50

Note:
µg/L = micrograms per liter
Oxygenates and Additional Compounds analyzed using EPA Method 8260B

NS = Not sampled
NA = Not analyzed

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
EDB = 1,2-Dibromoethane
1,2-DCA = 1,2-Dichloroethane

ATTACHMENT 6



LEGEND:

- MW-4 — GROUNDWATER MONITORING WELL INSTALLED BY STRATUS ENVIRONMENTAL, INC.
- MW-2 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.
- MW-4 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY FUGRO
- – SD — – STORM DRAIN/WESTERN BRANCH OF OLYMPIA CREEK
- (2615.48) — GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.
- 2615.4 — WATER TABLE CONTOUR IN FEET ABOVE MEAN SEA LEVEL DASHED WHERE INFERRED
- INFERRED DIRECTION OF GROUND FLOW

WELLS MEASURED ON 5/13/03

STRATUS ENVIRONMENTAL, INC.

0 30 FT
HORZ. SCALE

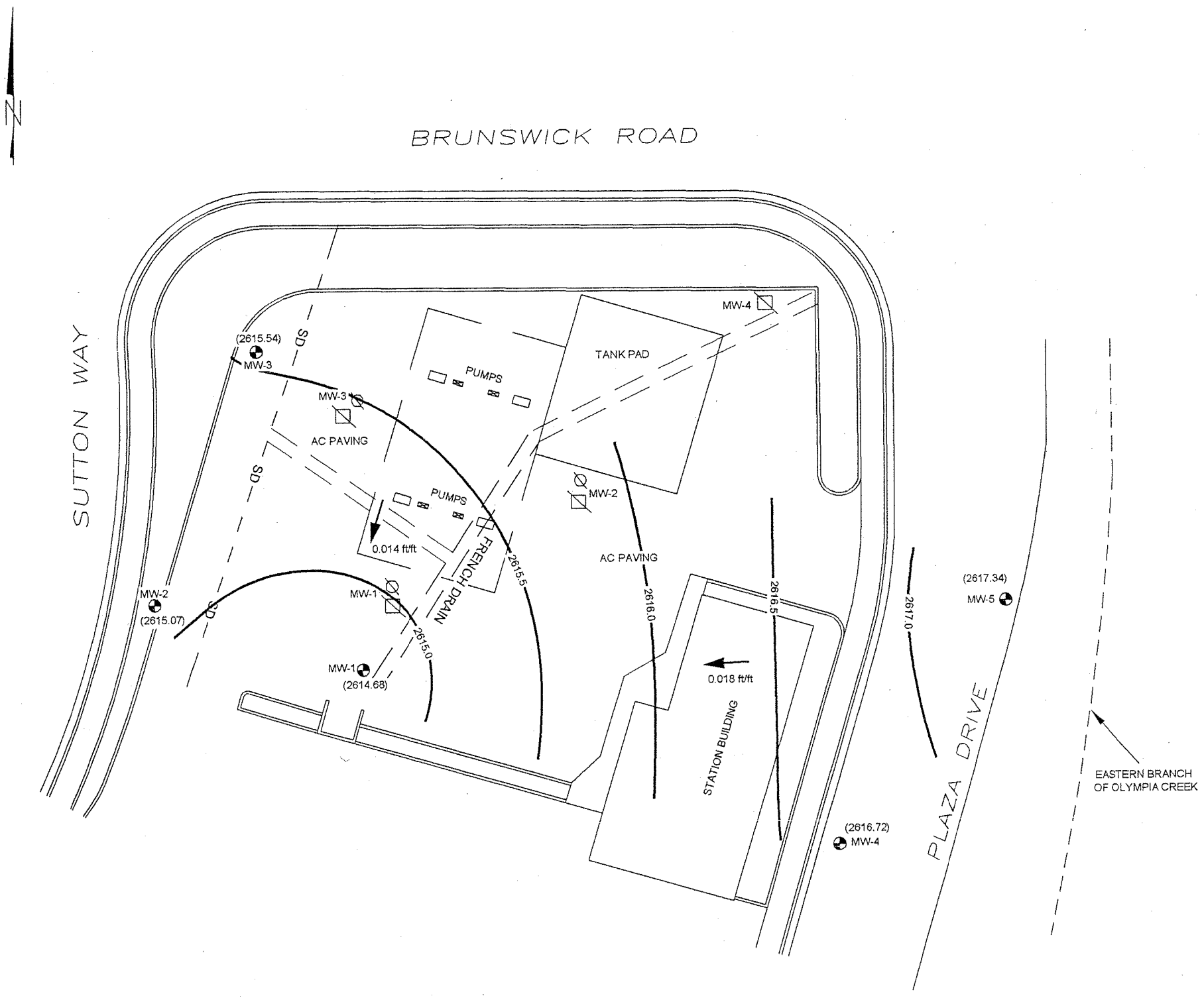
FLYER'S FUELING STATION NO. 31
1008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
2nd QUARTER 2003

FIGURE
2

PROJECT NO.
2028-31-01

Nella Oil\Quarterly JMP Jun 19, 2003 Nella Oil Quarterly Figures.dwg



LEGEND:

- MW-4 — GROUNDWATER MONITORING WELL INSTALLED BY STRATUS ENVIRONMENTAL, INC.
- MW-2 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.
- MW-4 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY FUGRO
- – –SD– – – STORM DRAIN/WESTERN BRANCH OF OLYMPIA CREEK
- (2614.68) GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.
- —2615.5— WATER TABLE CONTOUR IN FEET ABOVE MEAN SEA LEVEL DASHED WHERE INFERRED
- → INFERRED DIRECTION OF GROUND FLOW

WELLS MEASURED ON 9/03/03

STRATUS ENVIRONMENTAL, INC.

0 30 FT
HORZ. SCALE

FLYER'S FUELING STATION NO. 31
1008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
3rd QUARTER 2003

FIGURE
2

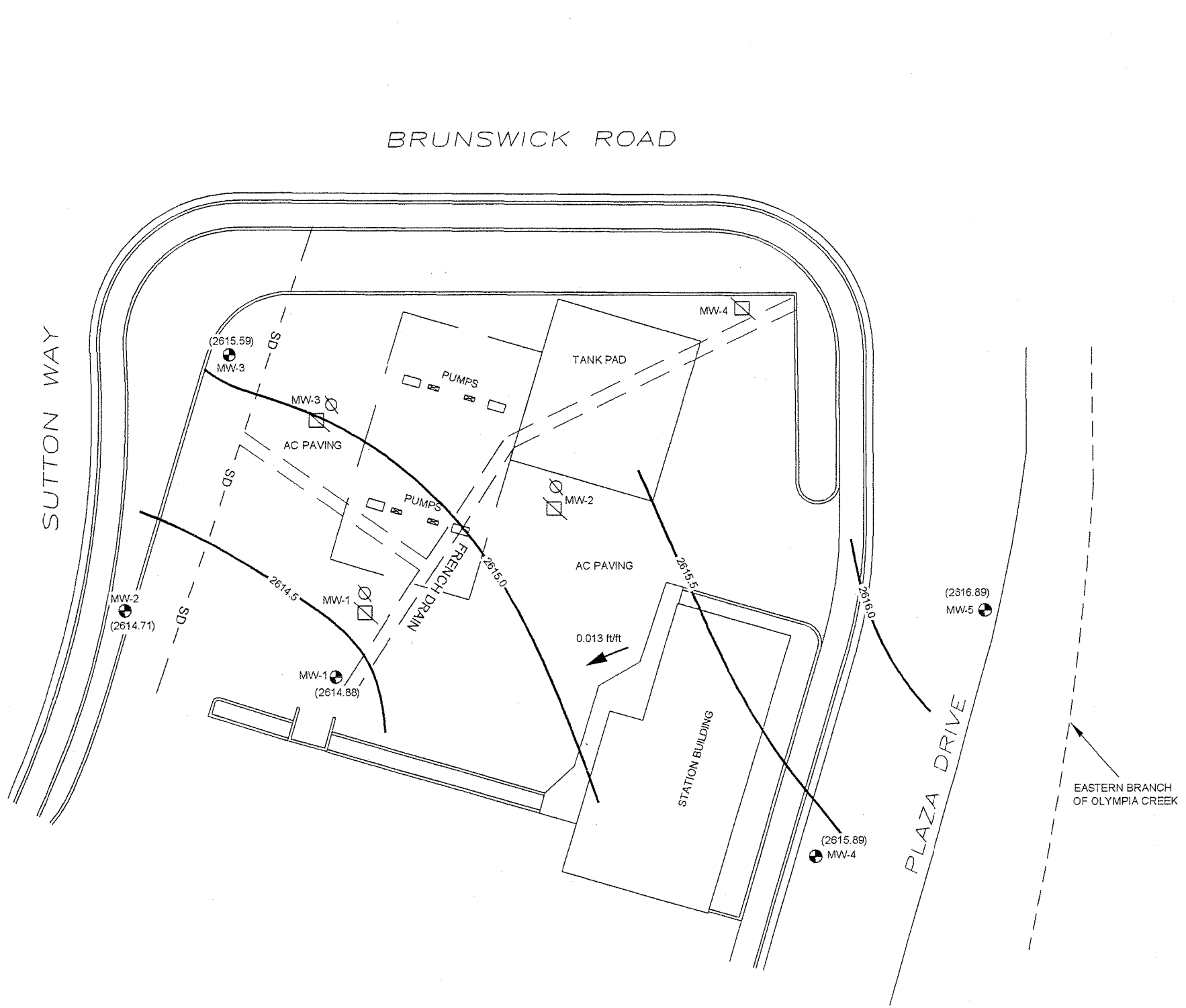
PROJECT NO.
2028-31-01

Nella Oil\Quarterly JMP Oct 23, 2003 Nella Oil Quarterly Figures.dwg

LEGEND:

- MW-4 — GROUNDWATER MONITORING WELL INSTALLED BY STRATUS ENVIRONMENTAL, INC.
- MW-2 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.
- MW-4 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY FUGRO
- - SD — — STORM DRAIN/WESTERN BRANCH OF OLYMPIA CREEK
- (2614.88) — GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.
- 2615.0 — WATER TABLE CONTOUR IN FEET ABOVE MEAN SEA LEVEL DASHED WHERE INFERRED
- INFERRED DIRECTION OF GROUND FLOW

WELLS MEASURED ON 12/29/03



STRATUS ENVIRONMENTAL, INC.

0 30 FT
HORZ. SCALE

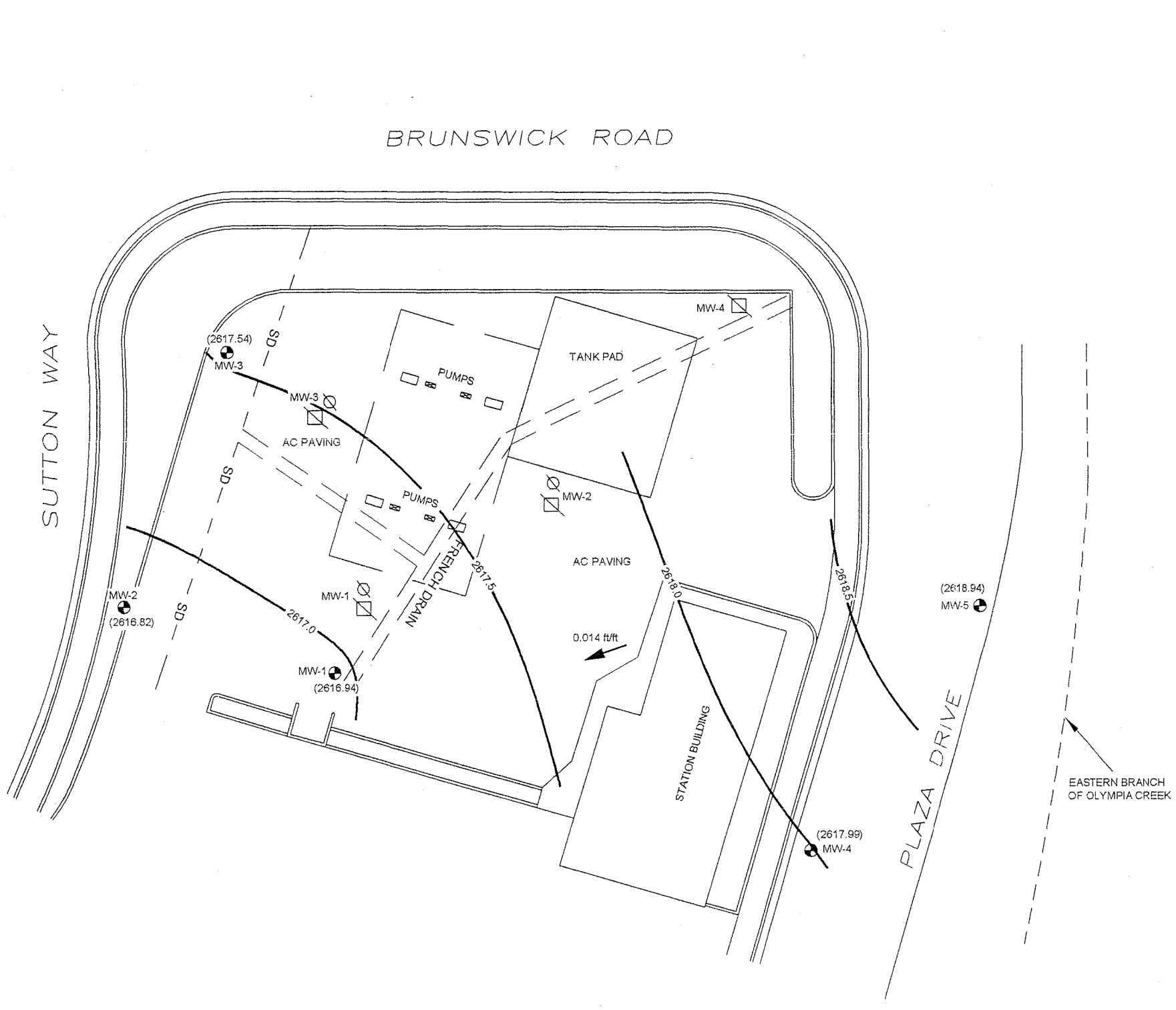
FLYER'S FUELING STATION NO. 31
1008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
4th QUARTER 2003

FIGURE
2

PROJECT NO.
2028-31-01

Nella Oil\Quarterly JMP Jan 30, 2004 Nella Oil Quarterly Figures.dwg



LEGEND:

MW-4	GROUNDWATER MONITORING WELL INSTALLED BY STRATUS ENVIRONMENTAL, INC.
MW-2	ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.
MW-4	ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY FUGRO
- -SD- - -	STORM DRAIN/WESTERN BRANCH OF OLYMPIA CREEK
(2616.94)	GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.
2618.0	WATER TABLE CONTOUR IN FEET ABOVE MEAN SEA LEVEL DASHED WHERE INFERRED
→	INFERRED DIRECTION OF GROUND FLOW

WELLS MEASURED ON 3/22/04

STRATUS
ENVIRONMENTAL, INC.

0 30 FT
HORZ. SCALE

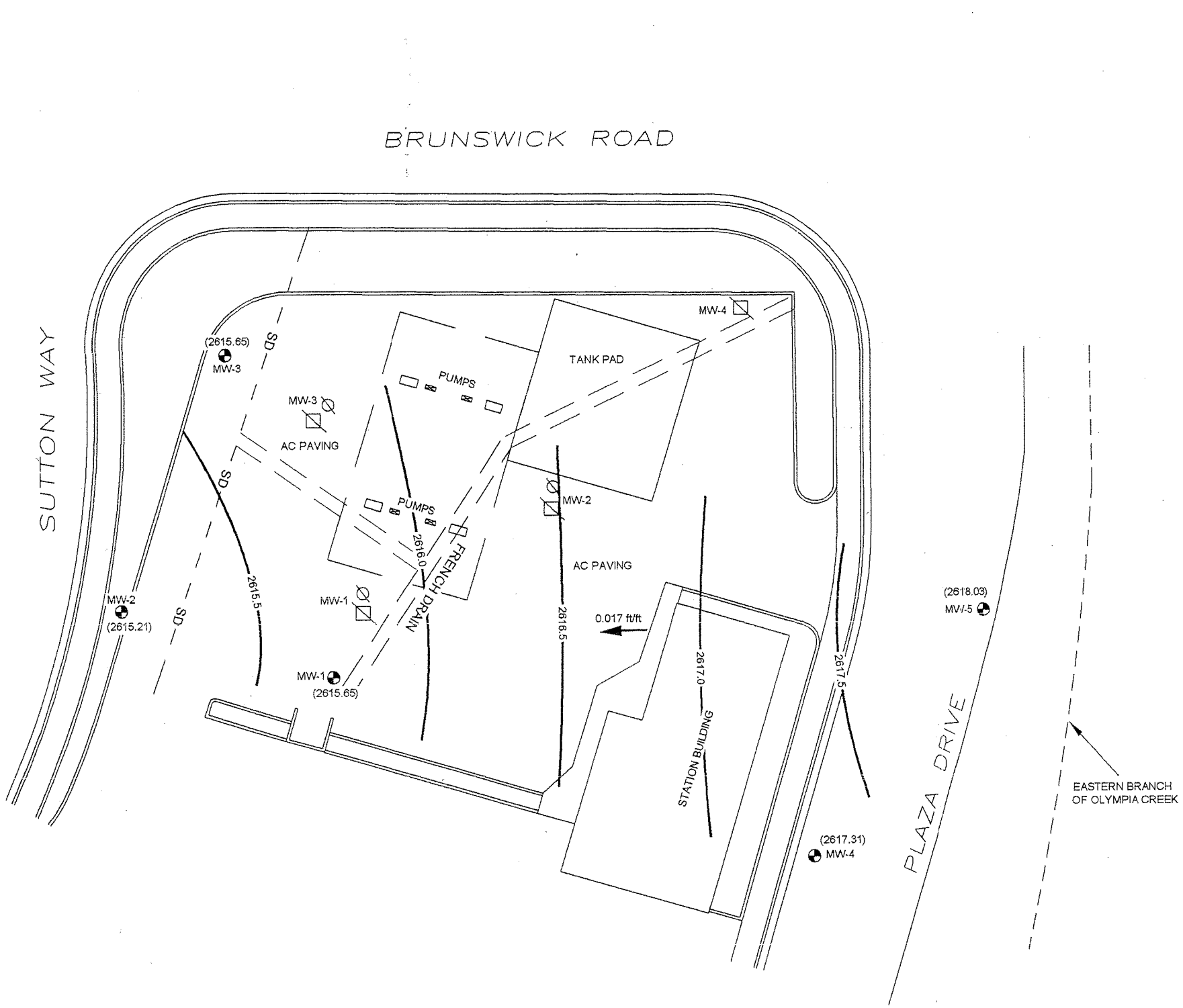
FLYER'S FUELING STATION NO. 31
1008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
1st QUARTER 2004

FIGURE
2

PROJECT NO.
2028-31-01

JMP Mar 30, 2004 Nellis Oil Quarterly Figures.dwg
Nellis Oil\Quarterly



LEGEND:

- MW-4 — GROUNDWATER MONITORING WELL INSTALLED BY STRATUS ENVIRONMENTAL, INC.
- MW-2 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.
- MW-4 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY FUGRO
- – – SD —— – STORM DRAIN/WESTERN BRANCH OF OLYMPIA CREEK
- (2615.65) GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.
- —2617.0— WATER TABLE CONTOUR IN FEET ABOVE MEAN SEA LEVEL DASHED WHERE INFERRED
- → INFERRED DIRECTION OF GROUND FLOW

WELLS MEASURED ON 6/02/04

STRATUS ENVIRONMENTAL, INC.

0 30 FT
HORZ. SCALE

FLYER'S FUELING STATION NO. 31
1008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
2nd QUARTER 2004

FIGURE
2

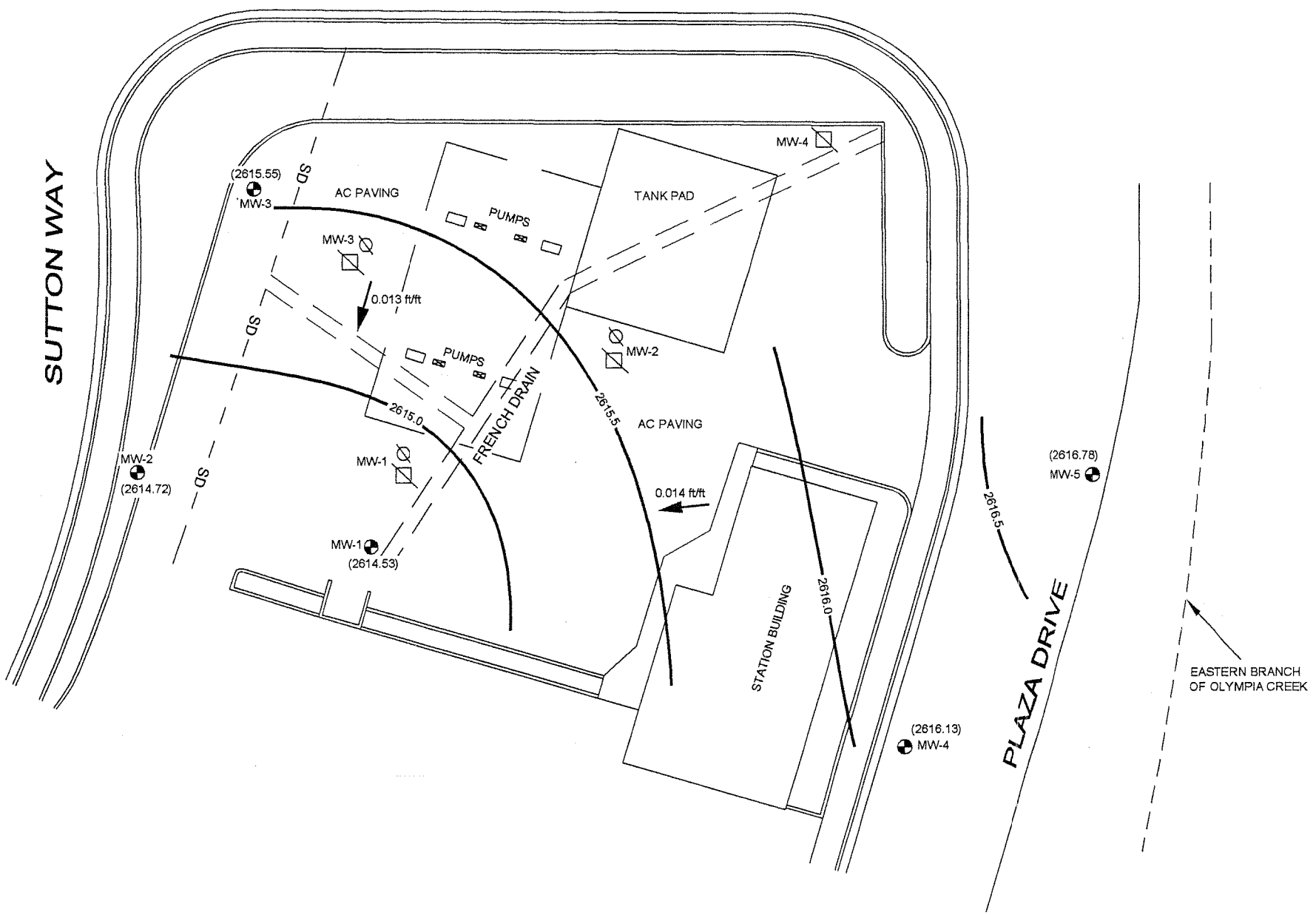
PROJECT NO.
2028-31-01

Nella Oil\Quarterly JMP Jun 23, 2004 Nella Oil Quarterly Figures.dwg

LEGEND:

- MW-4 — GROUNDWATER MONITORING WELL INSTALLED BY STRATUS ENVIRONMENTAL, INC.
- MW-2 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.
- MW-4 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY FUGRO
- — SD — — STORM DRAIN/ WESTERN BRANCH OF OLYMPIA CREEK
- (2614.53) — GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- 2616.0 — WATER TABLE CONTOUR IN FEET ABOVE MEAN SEA LEVEL, DASHED WHERE INFERRED
- INFERRED DIRECTION OF GROUND FLOW

WELLS MEASURED ON 8/31/04



Nella OilQuarterly JMP Sep 28, 2004 Nella Oil Quarterly Figures.dwg

STRATUS ENVIRONMENTAL, INC.

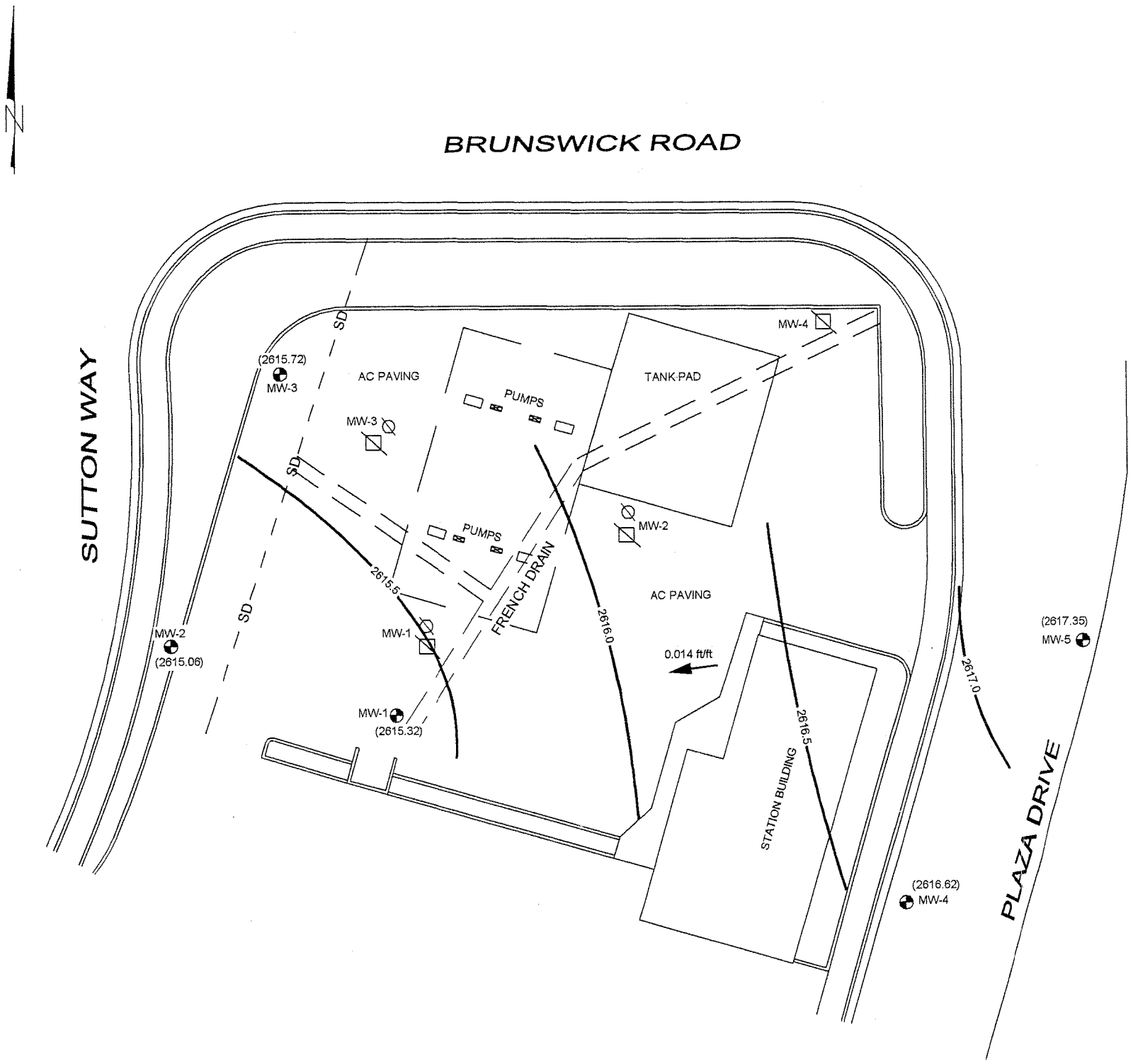
0 30 FT
HORZ. SCALE

NELLA OIL STATION NO. 31
1008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
3rd QUARTER 2004

FIGURE
2

PROJECT NO.
2028-31-01



LEGEND:

- MW-4 — GROUNDWATER MONITORING WELL INSTALLED BY STRATUS ENVIRONMENTAL, INC.
- MW-2 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.
- MW-4 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY FUGRO
- – – SD – – – STORM DRAIN/ WESTERN BRANCH OF OLYMPIA CREEK
- (2615.32) — GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.
- 2616.0 — WATER TABLE CONTOUR IN FEET ABOVE MEAN SEA LEVEL, DASHED WHERE INFERRED
- → INFERRED DIRECTION OF GROUND FLOW

WELLS MEASURED ON 12/03/04

STRATUS ENVIRONMENTAL, INC.

0 30 FT
HORZ. SCALE

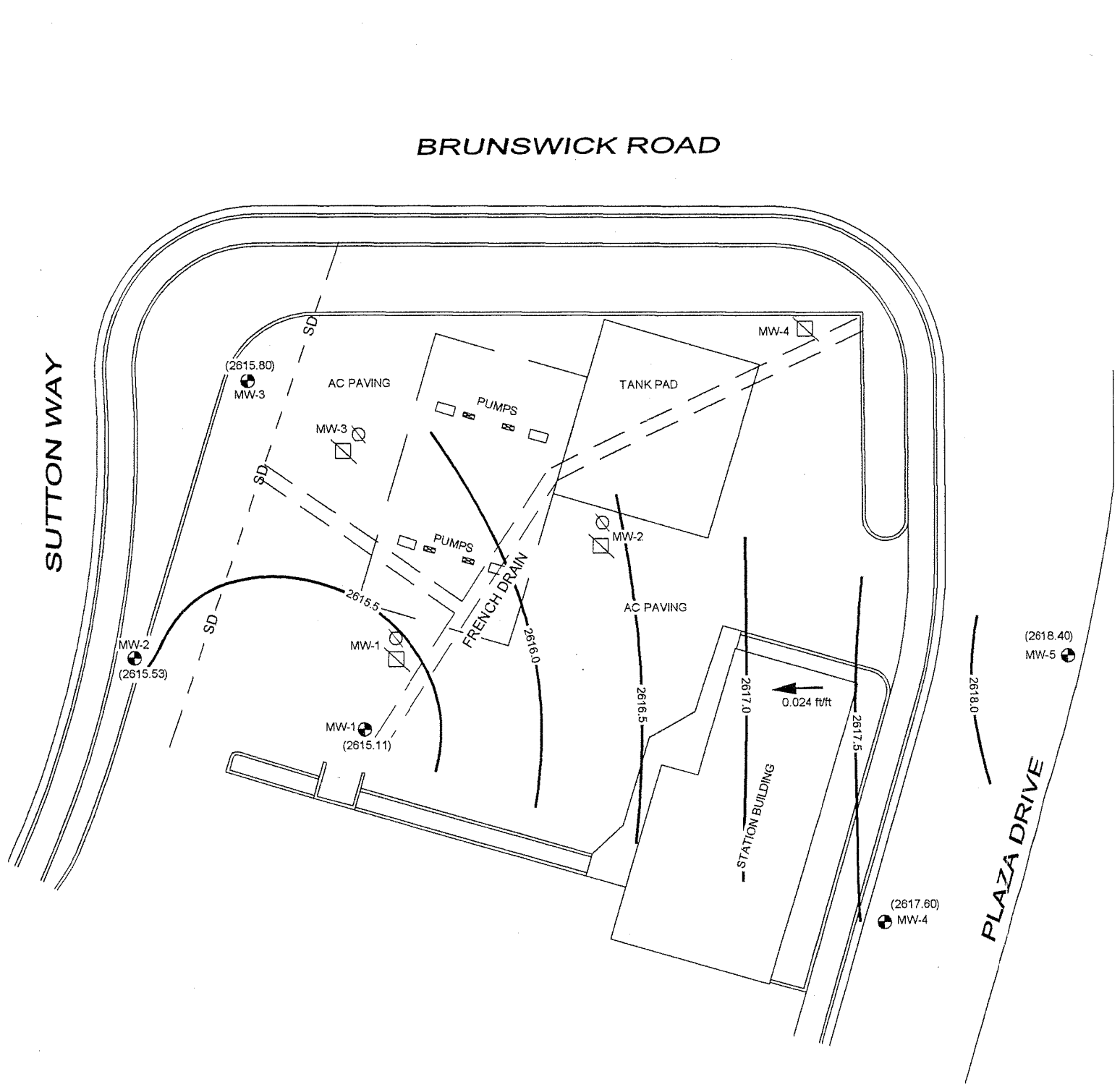
NELLA OIL STATION NO. 31
1008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
4th QUARTER 2004

FIGURE
2

PROJECT NO.
2028-31-01

Nella Oil\Quarterly JMP Jan 20, 2005 Nella Oil Quarterly Figures.dwg



LEGEND:

- MW-4 — GROUNDWATER MONITORING WELL INSTALLED BY STRATUS ENVIRONMENTAL, INC.
- MW-2 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.
- MW-4 — ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY FUGRO
- – - SD — – STORM DRAIN/ WESTERN BRANCH OF OLYMPIA CREEK
- (2615.11) — GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.
- —2616.0— WATER TABLE CONTOUR IN FEET ABOVE MEAN SEA LEVEL, DASHED WHERE INFERRED
- → INFERRED DIRECTION OF GROUND FLOW

WELLS MEASURED ON 3/14/05

STRATUS
ENVIRONMENTAL, INC.

0 30 FT
HORZ. SCALE

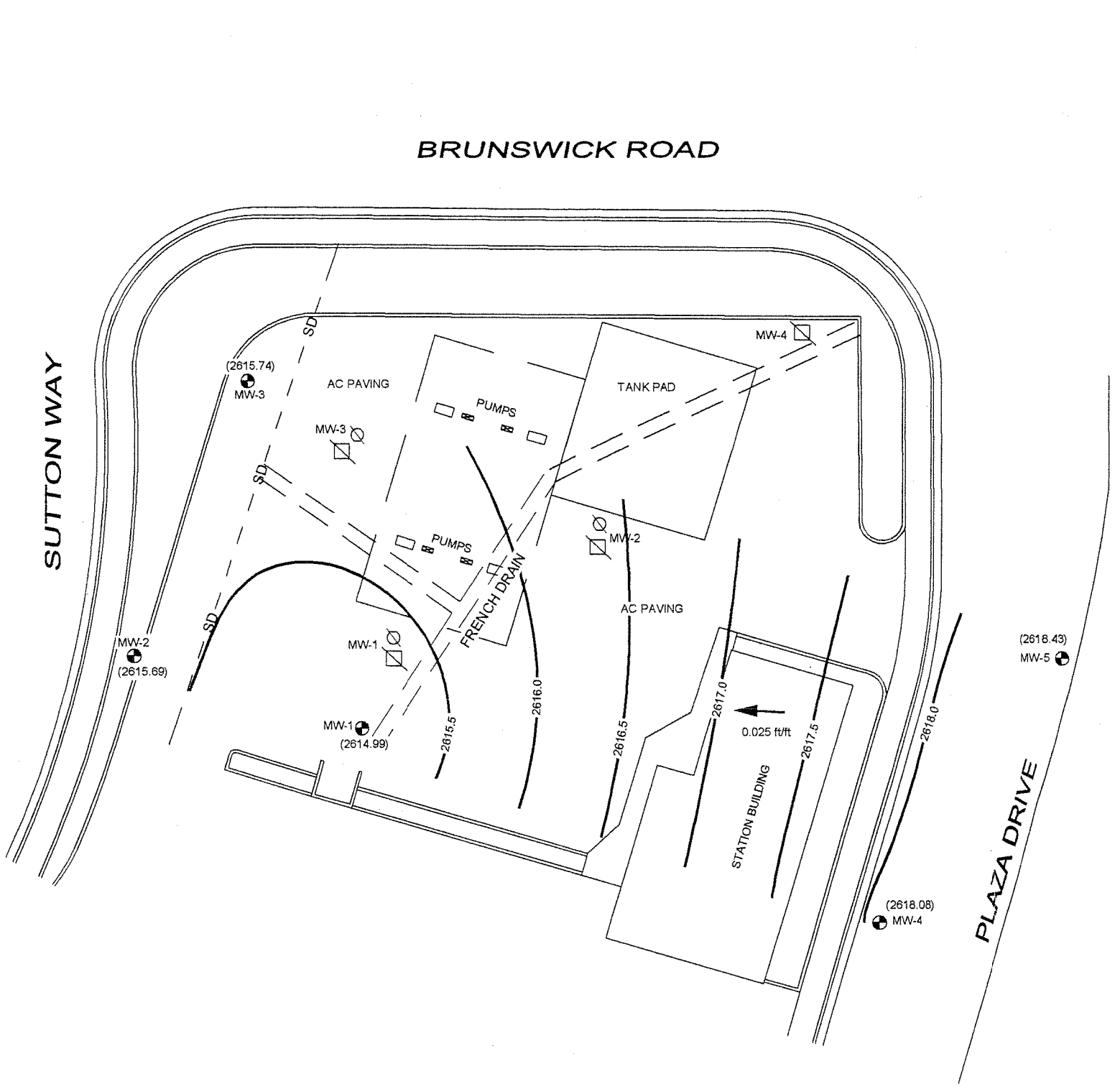
NELLA OIL STATION NO. 31
1008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
1st QUARTER 2005

FIGURE
2

PROJECT NO.
2028-31-01

Nella OilQuarterly JMP Mar 23, 2005 Nella Oil Quarterly Figures.dwg



LEGEND:

MW-4	GROUNDWATER MONITORING WELL INSTALLED BY STRATUS ENVIRONMENTAL, INC.
MW-2	ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY DELTA ENVIRONMENTAL CONSULTANTS, INC.
MW-4	ABANDONED GROUNDWATER MONITORING WELL INSTALLED BY FUGRO
- - SD — -	STORM DRAIN/ WESTERN BRANCH OF OLYMPIA CREEK
(2614.99)	GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL.
2616.0	WATER TABLE CONTOUR IN FEET ABOVE MEAN SEA LEVEL, DASHED WHERE INFERRED
	INFERRED DIRECTION OF GROUND FLOW

WELLS MEASURED ON 6/03/05

STRATUS ENVIRONMENTAL, INC.

0 30 FT

HORZ. SCALE

NELLA OIL STATION NO. 31
1008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
2nd QUARTER 2005

FIGURE
2

PROJECT NO.
2028-31-01

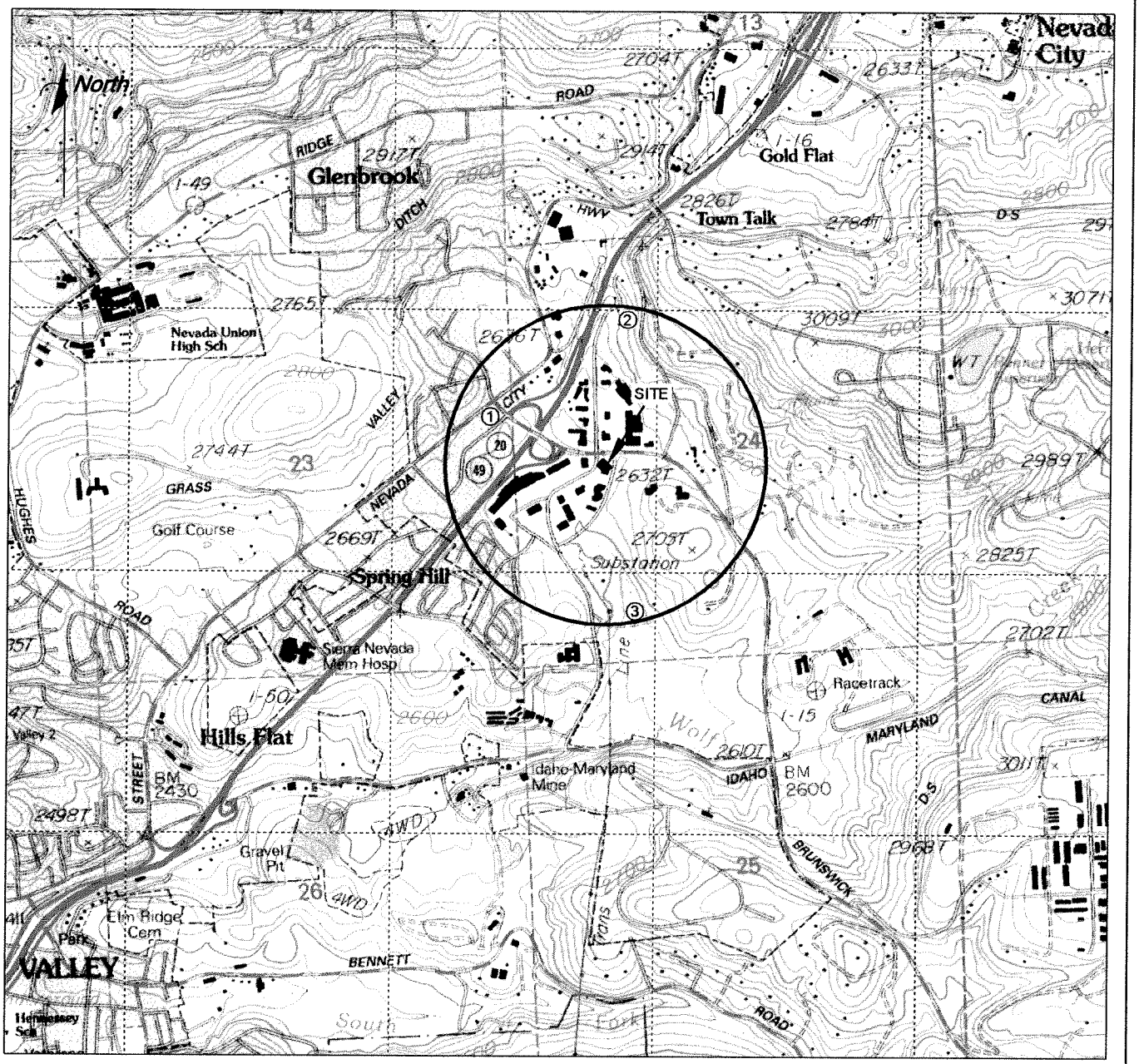
Nella Oil\Quarterly JMP Jul 07, 2005 Nella Oil Quarterly Figures.dwg

ATTACHMENT 7

NELLA OIL FACILITY 31
1008 PLAZA DRIVE, GRASS VALLEY, CALIFORNIA
WATER WELL SURVEY RESULTS

MAP ID NO.	OWNER	LOCATION	USE	CAPACITY (GPM)	TOTAL DEPTH (FEET BGS)	SCREEN INTERVAL (FEET BGS)	SANITARY SEAL
1	CIC Construction	50 ft. east of Nevada City Highway, 400 ft. south of Brunswick Road.	unknown	60	225	55 to 75	yes
2	Richard Kinney	East of Sutton Way, near the northern end of road	domestic	7	65	30 to 50	yes
5	Francis Teut	East of Sutton Way, approximately 2,000 feet south of Brunswick Road	domestic	5.5	400	open bottom	yes

Data obtained from California Department of Water Resources Central District



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
NEVADA CITY, CA
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1980

LEGEND

① WATER SUPPLY WELL LOCATION BASED ON INFORMATION PROVIDED BY DWR IN WELL DRILLER'S REPORT

QUADRANGLE LOCATION

0 2000 FT

SCALE 1:24,000

STRATUS
ENVIRONMENTAL, INC.

NELLA OIL STATION NO. 31
12008 PLAZA DRIVE
GRASS VALLEY, CALIFORNIA
SITE LOCATION MAP

FIGURE
1
PROJECT NO.
2028-31-1